RECORD OF COMMUNICATION

REGIONAL SAMPLE CONTROL CENTER

ROC #7

231783

TDF# 08-0215

DATE: 1/22/2008
SUBJECT: CLP Data Package for Quality Assurance Review
FROM: Hazardous Waste Support Section (HWSS)/RSCC
TO: HWSS ESAT-TOPO

Attached is the following ORGANIC Data Package to be reviewed for Quality Assurance

SITE: Cornell Dubilier **CASE #: 37088**

SDG#: B4HT9, B4J48, B4J68 **SAMPLER: W-RST**

PROJ. CODE: RS SITE SPILL #: GZ	#SAMPLES	MATRIX
LAB: SHEALY OPERABLE UNIT: 00	50	Soil
TURN-AROUND-TIME: 21 day	1	Water
CERCLIS ID # : NJD981557879	FRACTION:	PCBs

Contaminant(s) of Concern (If known)

REGION II RSCC DATA TRANSFER LOG

C Stamo 2/26/08 2:20 pm — Relinquished By
D Rooney 2/26/08 2:20 pm — Received By

Signature	Date/Time	Signature	Date/Time
Robert [illegible]	2/5/08	C. Stamo	2/5/08 10:26 am
X C. Stamo	2/15/08	R. J. Shelley	2/15/08 SDG # B4J48
R. J. Shelley B4J48	2/20/08	X C. Stamo	2/20/08
X C. Stamo	2/15/08	[illegible]	2/15/08 SDG#B4HT9
[illegible] SDG B4HT9		X C. Stamo	2/20/08
X C. Stamo	2/15/08	Vyomesh Parekh	02/15/08 SDG # B4J68
Vyomesh Parekh B4J68	2/20/08	X C. Stamo	2/20/08
X C. Stamo	all SDGs 2/20/08	R. J. Shelley	2/20/08 All SDG
R. J. Shelley All SDG	2/20/08 2:05 pm	Robert [illegible]	2/20/08 2:05 pm
Robert [illegible]	2/21/08 9:55 am	Hanif Sheikh	2/21/08 9:55 HS
Hanif Sheikh	2/26/08 1:18 PM	D Rooney	2/26/08 1:20 pm
[illegible]		[illegible]	

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J68

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-001

Sample wt/vol: 15.5 (g/mL) g Lab File ID: 018F1901

% Moisture: 26 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	860	U
11104-28-2	Aroclor-1221	860	U
11141-16-5	Aroclor-1232	860	U
53469-21-9	Aroclor-1242	860	U
12672-29-6	Aroclor-1248	860	U
11097-69-1	Aroclor-1254	59002~~55000~~	~~E~~ B *
11096-82-5	Aroclor-1260	860	U
37324-23-5	Aroclor-1262	860	U
11100-14-4	Aroclor-1268	860	U

* TRANSFERED FROM DILUTION RUN B4J68DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J69

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-002

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 019F2001

% Moisture: 30 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	2300	U
11104-28-2	Aroclor-1221	2300	U
11141-16-5	Aroclor-1232	2300	U
53469-21-9	Aroclor-1242	2300	U
12672-29-6	Aroclor-1248	2300	U
11097-69-1	Aroclor-1254	* 130000 ~~130000~~	~~E~~ B
11096-82-5	Aroclor-1260	2300	U
37324-23-5	Aroclor-1262	2300	U
11100-14-4	Aroclor-1268	2300	U

* TRANSFERED FROM DILUTION RUN B4J69 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J70

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-003

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 020F2101

% Moisture: 41 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	2800	U
11104-28-2	Aroclor-1221	2800	U
11141-16-5	Aroclor-1232	2800	U
53469-21-9	Aroclor-1242	2800	U
12672-29-6	Aroclor-1248	2800	U
11097-69-1	Aroclor-1254	130000 ~~100000~~	~~E~~ B *
11096-82-5	Aroclor-1260	2800	U
37324-23-5	Aroclor-1262	2800	U
11100-14-4	Aroclor-1268	2800	U

* TRANSFERED FROM DILUTION RUN B4J70DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J71

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-004

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 021F2201

% Moisture: 33 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 6.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	970	U
11104-28-2	Aroclor-1221	970	U
11141-16-5	Aroclor-1232	970	U
53469-21-9	Aroclor-1242	970	U
12672-29-6	Aroclor-1248	970	U
11097-69-1	Aroclor-1254	65000 ~~67000~~	~~E~~ B *
11096-82-5	Aroclor-1260	970	U
37324-23-5	Aroclor-1262	970	U
11100-14-4	Aroclor-1268	970	U

* TRANSFERED FROM DILUTION RUN.
B4J71DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J72

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-005

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 022F2301

% Moisture: 34 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	2500	U
11104-28-2	Aroclor-1221	2500	U
11141-16-5	Aroclor-1232	2500	U
53469-21-9	Aroclor-1242	2500	U
12672-29-6	Aroclor-1248	2500	U
11097-69-1	Aroclor-1254	210000~~200000~~	~~B~~ *
11096-82-5	Aroclor-1260	2500	U
37324-23-5	Aroclor-1262	2500	U
11100-14-4	Aroclor-1268	2500	U

* TRANSFERED FROM DILUTION RUN B4J72 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J73

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-006

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 023F2401

% Moisture: 33 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 6.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	970	U
11104-28-2	Aroclor-1221	970	U
11141-16-5	Aroclor-1232	970	U
53469-21-9	Aroclor-1242	970	U
12672-29-6	Aroclor-1248	970	U
11097-69-1	Aroclor-1254	41000 ~~51000~~	~~E B~~ *
11096-82-5	Aroclor-1260	970	U
37324-23-5	Aroclor-1262	970	U
11100-14-4	Aroclor-1268	970	U

* TRANSFERED FROM DILUTION RUN B4J73 DL

SOM01.2 (10/2006)

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J74

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-007

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 024F2501

% Moisture: 34 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: 5.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	21000 ~~23000~~	~~B~~ *
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

* TRANSFERED FROM DILUTION RUN B4J74DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J75

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-008

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 025F2601

% Moisture: 41 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	2800	U
11104-28-2	Aroclor-1221	2800	U
11141-16-5	Aroclor-1232	2800	U
53469-21-9	Aroclor-1242	2800	U
12672-29-6	Aroclor-1248	2800	U
11097-69-1	Aroclor-1254	190000~~190000~~	~~E B~~ *
11096-82-5	Aroclor-1260	2800	U
37324-23-5	Aroclor-1262	2800	U
11100-14-4	Aroclor-1268	2800	U

* VALUE TRANSFERED FROM DILUTION RUN

B4J75DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J76

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-009

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 015F1601

% Moisture: 37 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1000.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	51000	U
11104-28-2	Aroclor-1221	51000	U
11141-16-5	Aroclor-1232	51000	U
53469-21-9	Aroclor-1242	51000	U
12672-29-6	Aroclor-1248	51000	U
11097-69-1	Aroclor-1254	~~650000~~ 1100000	~~E B~~ *
11096-82-5	Aroclor-1260	51000	U
37324-23-5	Aroclor-1262	51000	U
11100-14-4	Aroclor-1268	51000	U

* TRANSFERED FROM DIL. RUN.

- B4J76DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J77

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-010

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 027F2801

% Moisture: 29 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	910	U
11104-28-2	Aroclor-1221	910	U
11141-16-5	Aroclor-1232	910	U
53469-21-9	Aroclor-1242	910	U
12672-29-6	Aroclor-1248	910	U
11097-69-1	Aroclor-1254	~~55000~~ 44000	~~E~~ B *
11096-82-5	Aroclor-1260	910	U
37324-23-5	Aroclor-1262	910	U
11100-14-4	Aroclor-1268	910	U

*TRANSFERED FROM DIL. RUN B4J77DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J78

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-011

Sample wt/vol: 15.4 (g/mL) g Lab File ID: 028F2901

% Moisture: 42 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	2800	U
11104-28-2	Aroclor-1221	2800	U
11141-16-5	Aroclor-1232	2800	U
53469-21-9	Aroclor-1242	2800	U
12672-29-6	Aroclor-1248	2800	U
11097-69-1	Aroclor-1254	140000 ~~150000~~	~~E B~~ J *
11096-82-5	Aroclor-1260	2800	U
37324-23-5	Aroclor-1262	2800	U
11100-14-4	Aroclor-1268	2800	U

* TRANSFERED FROM DIL. RUN.
B4J78 DL

SOM01.2 (10/2006)

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J78MS(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-011MS

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 029F3001

% Moisture: 42 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	~~76000~~ 170000	~~E P~~ J *
11104-28-2	Aroclor-1221	2800	U
11141-16-5	Aroclor-1232	2800	U
53469-21-9	Aroclor-1242	2800	U
12672-29-6	Aroclor-1248	2800	U
11097-69-1	Aroclor-1254	140000	~~E~~ B
11096-82-5	Aroclor-1260	39000	J
37324-23-5	Aroclor-1262	2800	U
11100-14-4	Aroclor-1268	2800	U

* TRANSFERRED FROM 2nd column

SOM01.2 (10/2006)

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J78MSD(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20019-011MD

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 030F3101

% Moisture: 42 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 50.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	* ~~78000~~ ~~170000~~	~~E P~~ J *
11104-28-2	Aroclor-1221	2800	U
11141-16-5	Aroclor-1232	2800	U
53469-21-9	Aroclor-1242	2800	U
12672-29-6	Aroclor-1248	2800	U
11097-69-1	Aroclor-1254	140000	~~E~~ B
11096-82-5	Aroclor-1260	39000	J
37324-23-5	Aroclor-1262	2800	U
11100-14-4	Aroclor-1268	2800	U

* TRANSFERRED FROM 2nd column

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS69(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J68

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: JQ71069-002

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 006F0701

% Moisture: 0.00 Decanted: (Y/N) N Date Received: _____

Extraction: (Type) PFEX Date Extracted: 01/09/2008

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 0.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	33	J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	34	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J48

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-001

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 023F2401

% Moisture: 33 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	44000 ~~52000~~	~~EB~~ J *
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

* Reported from - B4J48DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J49

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-002

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 024F2501

% Moisture: 46 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	60	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	60	U
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	500000 ~~99000~~	~~EPB~~ *
11096-82-5	Aroclor-1260	60	U
37324-23-5	Aroclor-1262	60	U
11100-14-4	Aroclor-1268	60	U

* Reported from B4J49 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J50

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-003

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 025F2601

% Moisture: 36 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	37000 ~~47000~~	~~ED~~ J*
11096-82-5	Aroclor-1260	51	U
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

* Reported from B4J50 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J51

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-004

Sample wt/vol: 15.4 (g/mL) g Lab File ID: 026F2701

% Moisture: 38 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	52	~~U~~ R
11104-28-2	Aroclor-1221	52	~~U~~
11141-16-5	Aroclor-1232	52	~~U~~
53469-21-9	Aroclor-1242	52	~~U~~
12672-29-6	Aroclor-1248	52	~~U~~
11097-69-1	Aroclor-1254	24000 ~~33000~~	~~EB~~ J *
11096-82-5	Aroclor-1260	52	~~U~~ R
37324-23-5	Aroclor-1262	52	~~U~~
11100-14-4	Aroclor-1268	52	~~U~~

* Reported from B4J51DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J52

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-005

Sample wt/vol: 15.5 (g/mL) g Lab File ID: 027F2801

% Moisture: 11 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	9700 ~~16000~~	~~EB~~ J *
11096-82-5	Aroclor-1260	36	U
37324-23-5	Aroclor-1262	36	U
11100-14-4	Aroclor-1268	36	U

* Reported from B4J52DL.

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J53

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-006

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 028F2901

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	1500 ~~2100~~	~~EPD~~ J *
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

* Reported from B4J53DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J54

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-007

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 029F3001

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg): ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	1700 ~~2200~~	~~EPB~~ J *
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

* Reported from B4J54 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J55

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-008

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 030F3101

% Moisture: 39 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	120000 ~~99000~~	~~BPB~~ J *
11096-82-5	Aroclor-1260	53	U
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

* Reported from B4J55DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J56

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-009

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 031F3201

% Moisture: 19 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	57000 ~~64000~~	EBJ *
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

* Reported from B4J56DL.

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J57

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: IL20018-010

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 017F1701

% Moisture: _____ Decanted: (Y/N) _____ Date Received: 12/19/2007

Extraction: (Type) CONT Date Extracted: 12/24/2007

Concentrated Extract Volume: 10000.0 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg): ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J58

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-011

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 032F3301

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	2600 ~~3700~~	~~BB~~ J *
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

* Reported from B4J58DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J59

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-012

Sample wt/vol: 15.4 (g/mL) g Lab File ID: 035F3601

% Moisture: 45 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg): ug/kg	Q
12674-11-2	Aroclor-1016	58	U
11104-28-2	Aroclor-1221	58	U
11141-16-5	Aroclor-1232	58	U
53469-21-9	Aroclor-1242	58	U
12672-29-6	Aroclor-1248	58	U
11097-69-1	Aroclor-1254	320000 ~~120000~~	~~EPB~~ J *
11096-82-5	Aroclor-1260	58	U
37324-23-5	Aroclor-1262	58	U
11100-14-4	Aroclor-1268	58	U

* Reported from B4J59 DL.

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J60

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-013

Sample wt/vol: 15.4 (g/mL) g Lab File ID: 036F3701

% Moisture: 41 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	170000 ~~110000~~	~~EPB~~ J *
11096-82-5	Aroclor-1260	55	U
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

* Reported from B4J60 DL.

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J61

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-014

Sample wt/vol: 15.7 (g/mL) g Lab File ID: 037F3801

% Moisture: 22 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	22000 ~~29000~~	~~EB~~ *
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

* Reported from B4J61DL2

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J62

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-015

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 038F3901

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	100000 ~~88000~~	~~EB~~ J *
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

* Reported from B4J62DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J63

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-016

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 039F4001

% Moisture: 26 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	48000 ~~57000~~	~~EB~~ J *
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

* Reported from B4J63 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J64

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-017

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 040F4101

% Moisture: 28 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	82000 ~~79000~~	~~EPB~~ J *
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

* Reported from B4J64 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J65

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-018

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 041F4201

% Moisture: 28 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 5.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	95000 ~~83000~~	~~EB~~ J *
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

* Reported from B4J65DL.

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J66

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-019

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 042F4301

% Moisture: 22 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	19000 ~~21000~~	~~EPB-J~~ *
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

* Reported from B4J66 DL.

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J67

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-020

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 043F4401

% Moisture: 44 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	58	U
11104-28-2	Aroclor-1221	58	U
11141-16-5	Aroclor-1232	58	U
53469-21-9	Aroclor-1242	58	U
12672-29-6	Aroclor-1248	58	U
11097-69-1	Aroclor-1254	52000 ~~60000~~	~~EPB~~ J *
11096-82-5	Aroclor-1260	58	U
37324-23-5	Aroclor-1262	58	U
11100-14-4	Aroclor-1268	58	U

* Reported from B4J67 DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J58MS(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-011MS

Sample wt/vol: 15.5 (g/mL) g Lab File ID: 033F3401

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	1100	~~P~~ J
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	4200	~~P~~
11096-82-5	Aroclor-1260	850	~~P~~ J
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J58MSD(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-011MD

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 034F3501

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	1200	~~E~~ J
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	4400	~~E~~ D
11096-82-5	Aroclor-1260	860	~~E~~ J
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4J58MSD(2)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL20018-011MD

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 034F3501

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/19/2007

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/08/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	1300	~~E~~
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	5300	~~EB~~
11096-82-5	Aroclor-1260	2200	~~EP~~
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS75(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: IQ70275-002

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 016F1601

% Moisture: _____ Decanted: (Y/N) _____ Date Received: _____

Extraction: (Type) CONT Date Extracted: 12/24/2007

Concentrated Extract Volume: 10000.0 (uL) Date Analyzed: 01/04/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	0.79 ~~0.80~~	J
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	0.87 ~~0.99~~	J
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS63(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IQ70463-002

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 022F2301

% Moisture: 0.00 Decanted: (Y/N) N Date Received: _____

Extraction: (Type) PFEX Date Extracted: 12/29/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/07/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 0.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	29	J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS39(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4J48

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: JQ71239-002

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 068F5201

% Moisture: 0.00 Decanted: (Y/N) N Date Received: _____

Extraction: (Type) PFEX Date Extracted: 01/11/2008

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/16/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 0.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	290	P
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HT9

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-001

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 058F5901

% Moisture: 25 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	3200 ~~3400~~	~~B~~ *
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

*Reported from B4HT9DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW0

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-002

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 059F6001

% Moisture: 15 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	910 ~~980~~	~~EP~~ J *
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

*Reported from B4HW0DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW1

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-003

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 060F6101

% Moisture: 18 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q	
12674-11-2	Aroclor-1016	39	U	
11104-28-2	Aroclor-1221	39	U	
11141-16-5	Aroclor-1232	39	U	
53469-21-9	Aroclor-1242	39	U	
12672-29-6	Aroclor-1248	39	U	
11097-69-1	Aroclor-1254	6500 ~~6900~~	~~EP~~	*
11096-82-5	Aroclor-1260	39	U	
37324-23-5	Aroclor-1262	39	U	
11100-14-4	Aroclor-1268	39	U	

*Reported from B4HW1DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW2

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-004

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 061F6201

% Moisture: 6.9 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.6 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg): ug/kg	Q
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	35	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	1200 ~~1100~~	~~EP~~ *
11096-82-5	Aroclor-1260	35	U
37324-23-5	Aroclor-1262	35	U
11100-14-4	Aroclor-1268	35	U

*Reported from B4HW2DL

SOM01.2 (10/2006)

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW3

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-005

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 062F6301

% Moisture: 16 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg): ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	2200 ~~2400~~	~~E~~ *
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

*Reported from B4HW3DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW4

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-006

Sample wt/vol: 15.5 (g/mL) g Lab File ID: 063F6401

% Moisture: 17 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.1 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	3700 ~~3700~~	E *
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

* Reported from B4HW4DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW5

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: IL14048-007

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 018F1901

% Moisture: _____ Decanted: (Y/N) _____ Date Received: 12/13/2007

Extraction: (Type) CONT Date Extracted: 12/17/2007

Concentrated Extract Volume: 10000.0 (uL) Date Analyzed: 12/20/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW6

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-008

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 064F6501

% Moisture: 16 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	160	~~P~~ J
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW7

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-009

Sample wt/vol: 15.5 (g/mL) g Lab File ID: 067F6801

% Moisture: 20 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q	
12674-11-2	Aroclor-1016	40	U	
11104-28-2	Aroclor-1221	40	U	
11141-16-5	Aroclor-1232	40	U	
53469-21-9	Aroclor-1242	40	U	
12672-29-6	Aroclor-1248	6500 ~~6900~~	~~EP~~	*
11097-69-1	Aroclor-1254	7100 ~~7900~~	E	*
11096-82-5	Aroclor-1260	40	U	
37324-23-5	Aroclor-1262	40	U	
11100-14-4	Aroclor-1268	40	U	

*Reported from B4HW7DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW8

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-010

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 068F6901

% Moisture: 9.2 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	6300	~~EP~~ J
11097-69-1	Aroclor-1254	8800 ~~10000~~	~~EP~~ J *
11096-82-5	Aroclor-1260	36	U
37324-23-5	Aroclor-1262	36	U
11100-14-4	Aroclor-1268	36	U

*Reported from B4HW8DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW9

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-011

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 069F7001

% Moisture: 9.0 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	36	U
12672-29-6	Aroclor-1248	3600 ~~3700~~	~~EP~~ J *
11097-69-1	Aroclor-1254	6100 ~~7000~~	~~EP~~ *
11096-82-5	Aroclor-1260	36	U
37324-23-5	Aroclor-1262	36	U
11100-14-4	Aroclor-1268	36	U

*Reported from B4HW9DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX0

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-012

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 070F7101

% Moisture: 21 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.5 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	4700 ~~4700~~	~~EP~~ J *
11097-69-1	Aroclor-1254	5300 ~~5500~~	~~EP~~ *
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

*Reported from B4HX0DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX1

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-013

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 071F7201

% Moisture: 23 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	16000 ~~18000~~	~~EP~~ J *
11097-69-1	Aroclor-1254	22000 ~~25000~~	E *
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

*Reported from B4HX1DL

SOM01.2 (10/2006)

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX2

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-014

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 074F7501

% Moisture: 12 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	160	R J
11096-82-5	Aroclor-1260	37	U
37324-23-5	Aroclor-1262	37	U
11100-14-4	Aroclor-1268	37	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX3

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-015

Sample wt/vol: 15.1 (g/mL) g Lab File ID: 075F7601

% Moisture: 35 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.3 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	50	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	160	P
11096-82-5	Aroclor-1260	50	U
37324-23-5	Aroclor-1262	50	U
11100-14-4	Aroclor-1268	50	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX4

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-016

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 076F7701

% Moisture: 12 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	160	P J
11096-82-5	Aroclor-1260	37	U
37324-23-5	Aroclor-1262	37	U
11100-14-4	Aroclor-1268	37	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX5

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-017

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 077F7801

% Moisture: 26 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.4 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	210	~~P~~ J
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX6

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-018

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 078F7901

% Moisture: 15 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q	
12674-11-2	Aroclor-1016	380	U	
11104-28-2	Aroclor-1221	380	U	
11141-16-5	Aroclor-1232	380	U	
53469-21-9	Aroclor-1242	380	U	
12672-29-6	Aroclor-1248	17000 ~~17000~~	~~P~~	*
11097-69-1	Aroclor-1254	20000 ~~22000~~	~~E~~	*
11096-82-5	Aroclor-1260	380	U	
37324-23-5	Aroclor-1262	380	U	
11100-14-4	Aroclor-1268	380	U	

*Reported from B4HX6D1

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX7

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-019

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 041F4201

% Moisture: 14 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/28/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/10/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	38	UJ
11104-28-2	Aroclor-1221	38	UJ
11141-16-5	Aroclor-1232	38	UJ
53469-21-9	Aroclor-1242	38	UJ
12672-29-6	Aroclor-1248	38	UJ
11097-69-1	Aroclor-1254	220	PB J
11096-82-5	Aroclor-1260	88	J
37324-23-5	Aroclor-1262	38	UJ
11100-14-4	Aroclor-1268	38	UJ

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX8

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-020

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 079F8001

% Moisture: 18 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	400	U
11104-28-2	Aroclor-1221	400	U
11141-16-5	Aroclor-1232	400	U
53469-21-9	Aroclor-1242	400	U
12672-29-6	Aroclor-1248	17000 ~~18000~~	~~E~~ P *
11097-69-1	Aroclor-1254	21000 ~~24000~~	~~E~~ *
11096-82-5	Aroclor-1260	400	U
37324-23-5	Aroclor-1262	400	U
11100-14-4	Aroclor-1268	400	U

*Reported from B4HX8DL

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW6MS(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-008MS

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 065F6601

% Moisture: 16 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	P J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	190	P J
11096-82-5	Aroclor-1260	250	P J
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HW6MSD(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-008MD

Sample wt/vol: 15.2 (g/mL) g Lab File ID: 066F6701

% Moisture: 16 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 8.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	300 ~~620~~	~~EP~~ J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	340	~~P~~ J
11096-82-5	Aroclor-1260	200	~~P~~ J
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
B4HX1RXMSD(2)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IL14048-013MD

Sample wt/vol: 15.3 (g/mL) g Lab File ID: 018F1901

% Moisture: 0.00 Decanted: (Y/N) N Date Received: 12/13/2007

Extraction: (Type) PFEX Date Extracted: 01/07/2008

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/12/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.2 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	26000	E
11097-69-1	Aroclor-1254	21000	E B
11096-82-5	Aroclor-1260	320	U
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS98(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IQ70198-002

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 057F5801

% Moisture: 0.00 Decanted: (Y/N) N Date Received: _____

Extraction: (Type) PFEX Date Extracted: 12/21/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/06/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 0.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	25 ~~27~~	J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	29 ~~30~~	J
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS45(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: JQ70945-002

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 033F3301

% Moisture: 0.00 Decanted: (Y/N) N Date Received: _____

Extraction: (Type) PFEX Date Extracted: 01/07/2008

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/11/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 0.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg): ug/kg	Q
12674-11-2	Aroclor-1016	11	J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	13	~~JP~~ J
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS71(1)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: IQ69871-002

Sample wt/vol: 1000 (g/mL) mL Lab File ID: 016F1701

% Moisture: _____ Decanted: (Y/N) _____ Date Received: _____

Extraction: (Type) CONT Date Extracted: 12/17/2007

Concentrated Extract Volume: 10000.0 (uL) Date Analyzed: 12/20/2007

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____ Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg): ug/L	Q
12674-11-2	Aroclor-1016	0.89 ~~1.1~~	J
11104-28-2	Aroclor-1221	1.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	0.97 ~~1.1~~	J
37324-23-5	Aroclor-1262	1.0	U
11100-14-4	Aroclor-1268	1.0	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
ALCS65(2)

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-05-031

Lab Code: SHEALY Case No.: 37088 Mod. Ref No.: _____ SDG No.: B4HT9

Matrix: (SOIL/SED/WATER) Soil Lab Sample ID: IQ70465-002

Sample wt/vol: 15.0 (g/mL) g Lab File ID: 027F2801

% Moisture: 0.00 Decanted: (Y/N) N Date Received: _____

Extraction: (Type) PFEX Date Extracted: 12/28/2007

Concentrated Extract Volume: 5000.0 (uL) Date Analyzed: 01/09/2008

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 0.0 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/kg	Q
12674-11-2	Aroclor-1016	32 ~~35~~	J
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	34	
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 37088 SDG Nos.: B4HT9
LABORATORY: Shealy Environment SITE: Cornell Dubilier
SAMPLER: W-RST ANALYSIS: PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1) August 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material), "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: Dorina Christina Alliu Date: February/16/2008

Peer Reviewer's Signature: Date: Feb/20/2008

Verified By: Date: 2/26/2008

SDG# B4HT9

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

The following aroclor soil samples are outside primary extraction holding time criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

B4HT9RX, B4HW0RX, B4HW1RX, B4HW2RX, B4HW3RX, B4HW4RX, B4HW6RX, B4HW6RXMS, B4HW6RXMSD, B4HW7RX, B4HW8RX, B4HW9RX, B4HX0RX, B4HX1RX, B4HX1RXMS, B4HX1RXMSD, B4HX2RX, B4HX3RX, B4HX4RX, B4HX5RX, B4HX6RX, B4HX7, B4HX8RX

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

The following aroclor samples have surrogate percent recoveries which exceed 150% but are less than or equal to 200%. Detected compounds are qualified J. Non-detected compounds are not qualified

Tetrachloro-m-xylene B4HW3
Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

The following aroclor samples have surrogate percent recoveries less than 30% but greater than 10%. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

Decachlorobiphenyl B4HW5, B4HX3
Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

Tetrachloro-m-xylene B4HW7, B4HX0
Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

The relative percent difference (RPD) between the following aroclor matrix spike and matrix spike duplicate recoveries is outside criteria. Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1260 B4HX1MS, B4HX1MSD, B4HX1, B4HX1DL, B4HX1RXMS, B4HX1RXMSD, B4HX1RX
Aroclor-1016 B4HW6MS, B4HW6MSD, B4HW6, B4HW6RXMS, B4HW6RXMSD, B4HW6RX, B4HX1MS, B4HX1MSD, B4HX1, B4HX1RXMS, B4HX1RXMSD, B4HX1RX, B4HX1RXDL

The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Non-detected compounds are not qualified.

Aroclor-1260 B4HX1MS, B4HX1MSD, B4HX1, B4HX1DL, B4HX1RXMS, B4HX1RXMSD, B4HX1
Aroclor-1016 B4HW6MSD, B4HW6MS, B4HW6, B4HW6RXMS, B4HW6RXMSDL, B4HW6RX, B4HX1MS, B4HX1MSD, B4HX1, B4HX1DL, B4HX1RXMS, B4HX1RXMSD, B4HX1RX

4. Laboratory Control Samples (LCS):

The LCSs data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

The following aroclor samples are associated with a laboratory control sample (LCS) with percent recoveries outside the lower limit of the criteria window. Detected compounds are qualified J. Non-detected compounds are qualified R.
Aroclor-1260 B4HT9RX, B4HW0RX, B4HW1RX, B4HW2RX, B4HW3RX, B4HW4RX, B4HW6RX, B4HW6RXMS, B4HW6RXMSD, B4HW7RX, B4HW8RX, B4HW9RX, B4HX0RX, B4HX1RX, B4HX1RXMS, B4HX1RXMSD, B4HX2RX, B4HX3RX, B4HX4RX, B4HX5RX, B4HX6RX, B4HX8RX

Aroclor-1016 B4HT9RX, B4HW0RX, B4HW1RX, B4HW2RX, B4HW3RX, B4HW4RX, B4HW6RX, B4HW6RXMS, B4HW6RXMSD, B4HW7RX, B4HW8RX, B4HW9RX, B4HX0RX, B4HX1RX, B4HX1RXMS, B4HX1RXMSD, B4HX2RX, B4HX3RX, B4HX4RX, B4HX5RX, B4HX6RX, B4HX8RX

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U.

The following analytes in the sample shown were qualified with "U" for these reasons:

A) Method blank contamination:

No additional qualification was done on Method blank contamination.

B) Field or rinse blank contamination:

Not Applicable

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 15% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

The following aroclor samples are associated with an opening or closing CCV with % Difference exceeding criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

Decachlorobiphenyl B4HT9RX, B4HW0RX, B4HW1RX, B4HW2RX, B4HW3RX, B4HW4RX, B4HW7RX, B4HW8RX, B4HW9RX, B4HX0RX, B4HX1RX, B4HX1RXMS, B4HX1RXMSD, B4HX3RX, B4HX8RX

Aroclor-1248, Aroclor-1254.

7. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J.

Qualified "J"

Aroclor-1260 B4HW6MS, B4HW6MSD, B4HX1RXMS, ALCS45

Aroclor-1254 B4HW0, B4HW0DL, B4HW1, B4HW2, B4HW2RX, B4HW3RX, B4HW6, B4HW6MS, B4HW6RX, B4HW8, B4HW9, B4HX1MS, B4HX1MSD, B4HX2, B4HX2RX, B4HX3, B4HX4, B4HX4RX, B4HX5, B4HX6RX, B4HX7

Aroclor-1248 B4HW7, B4HW7DL, B4HW8, B4HW9DL, B4HX0, B4HX0DL, B4HX1, B4HX1DL, B4HX6, B4HX8, B4HX8DL

Aroclor-1016 B4HW6MS, B4HX1MS

The following aroclor samples have percent differences between analyte results in the range of 71-100%. Detected compounds are qualified J. Non-detected compounds are not qualified.

Qualified "J"

Aroclor-1254 B4HW6RXMS, B4HW6RXMSD, B4HX5RX

Aroclor-1248 B4HW9, B4HX1MS

The following aroclor samples have percent differences between analyte results exceeding 200%. Detected compounds are qualified J. Non-detected compounds are not qualified.
Qualified "J"

Aroclor-1254 B4HW6MSD

The following aroclor samples have percent differences between analyte results in the range of 101-200%.. Using professional judgment to qualify the detected compounds based on whether there are peak interferences on either column Detected compounds are not qualified J and non-detected compounds are not qualified.

Qualified "J"

Aroclor-1260 B4HX1MS, B4HX1MSD

Aroclor-1016 B4HW6MSD

8. CONTRACT PROBLEMS NON-COMPLIANCE:

Sample B4HW5 was not Re-analyzed due to Surrogate recovery.

9. FIELD DOCUMENTATION:

No problems.

10. OTHER PROBLEMS:

B4HX1RXMSD(1) & B4HX1RXMSD(2) the values do not match for Aroclor 1016 & Aroclor 1260.

B4HX1MS & B4HX1MSD the values do not match for Aroclor 1016 & Aroclor 1260

B4HW8 Aroclor 1248 is reported from the initial run and qualified as J even though the value is over the calibration range. The dilution analysis was done but Aroclor 1248 value was below CRQL for sample B4HW8DL.

All soil samples in this SDG with the exception of B4HX7, had to be re-extracted due to un-matching chromatograms for B4HX1MS and B4HX1MSD, see the SDG Narrative for more details.

11. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.
B4HT9DL, B4HW0DL, B4HW1DL, B4HW2DL, B4HW3DL, B4HW4DL, B4HW7DL, B4HW8DL, B4HW9DL, B4HX0DL, B4HX1DL, B4HX6DL, B4HX8DL, B4HT9RX, B4HW0RX, B4HW1RX, B4HW2RX, B4HW3RX, B4HW4RX, B4HW6RX, B4HW7RX, B4HW8RX, B4HW9RX, B4HX0RX, B4HX1RX, B4HX2RX, B4HX3RX, B4HX4RX, B4HX5RX, B4HX6RX, B4HX8RX

Functional Guidelines for Evaluating Organic Analysis

CASE No.: 37088
LABORATORY: Shealy Environmental
SAMPLER: W-RST

SDG No.: B4J48
SITE: Cornell Dubilier
ANALYSIS: PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1) August 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material), "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: R.J. Shelley Raxa J Shelley — Date: February/19/2008

Peer Reviewer's Signature: Rahul Bahn — Date: Feb 20 /2008

Verified By: Henry Smith — Date: 2/26/2008

SDG# B4J48

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

The following aroclor soil samples are outside primary extraction holding time criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.
B4J51RX, B4J51RXDL

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

The following undiluted aroclor samples have surrogate percent recoveries less than 10%. Detected compounds are qualified J. Non-detected compounds are qualified R.

Decachlorobiphenyl B4J51

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

Tetrachloro-m-xylene B4J51

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

3. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data.

The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Non-detected compounds are not qualified.
Aroclor-1260 B4J58MS, B4J58MSD, B4J58, B4J58DL
Aroclor-1016 B4J58MS, B4J58MSD, B4J58, B4J58DL

4. Laboratory Control Samples (LCS):

The LCSs data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

No problems found for this qualification.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U.

The following analytes in the sample shown were qualified with "U" for these reasons:

A) **Method blank contamination:**
No additional qualification was applied due to method blank contamination.

B) **Field or rinse blank contamination:**
Not applicable.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) **Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):**

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 15% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

The following aroclor samples are associated with an opening or closing CCV with % Difference exceeding criteria. Detected compounds are qualified J. Non-detected compounds are qualified UJ.

Decachlorobiphenyl

B4J48DL, B4J50DL, B4J51DL, B4J52DL, B4J53DL, B4J54DL, B4J55DL, B4J56DL, B4J58DL, B4J59DL, B4J60DL, B4J61DL, B4J62DL, B4J63DL, B4J64DL, B4J65DL, B4J66DL, B4J67DL
Aroclor-1254

Decachlorobiphenyl

ABLK39, B4J51RX, B4J51RXDL
Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

7. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following aroclor samples have percent differences between analyte results in the range of 26-70%. Detected compounds are qualified J.

Aroclor-1254 B4J52DL, B4J53, B4J53DL, B4J54, B4J54DL, B4J55, B4J58DL, B4J60, B4J66, B4J67

The following aroclor samples have percent differences between analyte results in the range of 101-200%. Detected compounds are qualified J.

Aroclor-1260 B4J58MS, B4J58MSD

8. CONTRACT PROBLEMS NON-COMPLIANCE:

9. FIELD DOCUMENTATION:
No problems.

10. OTHER PROBLEMS:
None.

11. This package contains reextractions, reanalyses or dilutions. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.
B4J48DL, B4J49DL, B4J50DL, B4J51DL, B4J51RX, B4J51RXDL, B4J52DL, B4J53DL, B4J54DL, B4J55DL, B4J56DL, B4J58DL, B4J59DL, B4J60DL, B4J61DL, B4J61DL2, B4J62DL, B4J63DL, B4J64DL, B4J65DL, B4J66DL, B4J67DL

Functional Guidelines for Evaluating Organic Analysis

CASE No.:37088
LABORATORY: SHEALY
SAMPLER: W-RST

SDG No.: B4J68
SITE: Cornell Dubilier
ANALYSIS: PCB

DATA ASSESSMENT

The current SOP HW-37 (Revision 1) August 2007, USEPA Region II Data Validation SOP for Statement of Work SOM01.2 for evaluating organic data have been applied.

All data are valid and acceptable except those analytes rejected "R"(unusable). Due to the detection of QC problems, some analytes may have the "J" (estimated), "N"(presumptive evidence for the presence of the material), "U" (non-detect) or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All action is detailed on the attached sheets.

The "R" flag means that the associated value is unusable. In other words, significant data bias is evident and the reported analyte concentration is unreliable.

Reviewer's Signature: Vyomesh Parekh — Date: February /20 /2008

Peer Reviewer's Signature: — Date: Feb /20 /2008

Verified By: — Date: 2 /26 /2008

SDG# B4J68

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded.

The following action was taken in the samples and analytes shown due to excessive holding time.

The following aroclor soil samples are outside primary extraction holding time criteria. Detected compounds are qualified J. Nondetected compounds are qualified UJ.

B4J68RX, B4J68RXDL, B4J69RX, B4J69RXDL, B4J70RX, B4J70RXDL, B4J71RX, B4J71RXDL, B4J72RX, B4J72RXDL, B4J73RX, B4J73RXDL, B4J74RX, B4J74RXDL, B4J75RX, B4J75RXDL, B4J76RX, B4J76RXDL, B4J77RX, B4J77RXDL, B4J78RX, B4J78RXDL, B4J78RXMS, B4J78RXMSD

2. SURROGATES

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate concentrations were outside contract specifications, qualifications were applied to the samples and analytes as shown below.

The following Aroclor samples have surrogate percent recoveries that are greater than 200% Detected compounds are qualified J. Nondetected compounds are not qualified.

Decachlorobiphenyl B4J69RX

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

The following aroclor samples have surrogate percent recoveries which exceed 150% but are less than or equal to 200%. Detected compounds are qualified J. Nondetected compounds are not qualified.

Decachlorobiphenyl ALCS54, B4J74RX, ABLK54

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

Tetrachloro-m-xylene ALCS54, B4J74RX, ABLK54

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

3. **MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:**

The following Aroclor matrix/matrix spike duplicate samples have percent recoveries that are greater than the upper acceptance limit Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4J78, B4J78MS, B4J78MSD, B4J78RX, B4J78RXMS, B4J78RXMSD

Aroclor-1016 B4J78, B4J78MS, B4J78MSD, B4J78RX, B4J78RXMS, B4J78RXMSD

4. **Laboratory Control Samples (LCS):**

The LCSs data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

The following aroclor samples are associated with a laboratory control sample (LCS) with percent recoveries outside the upper limit of the criteria window. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260, Aroclor-1060

ALCS54 B4J74RX, B4J74RXDL, B4J75DL, B4J75RX, B4J76RX, B4J76RXDL, B4J77RX, B4J77RXDL, B4J78RX, B4J78RXDL, B4J78RXMS, B4J78RXMSD

Aroclor-1016 ALCS66

B4J68, B4J68DL, B4J69, B4J69DL, B4J70, B4J70DL, B4J71, B4J71DL, B4J72, B4J72DL, B4J73, B4J73DL, B4J74, B4J74DL, B4J75, B4J75RXDL, B4J76, B4J76DL, B4J77, B4J77DL, B4J78, B4J78DL, B4J78MS, B4J78MSD

5. **BLANK CONTAMINATION:**

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U.

The following analytes in the sample shown were qualified with "U" for these reasons:

A) **Method blank contamination:**

The following aroclor samples have analyte concentrations above the quantitation limit (CRQL). No qualification required.

Aroclor-1254 B4J68, B4J68DL, B4J69, B4J69DL, B4J70, B4J70DL, B4J71, B4J71DL, B4J72, B4J72DL, B4J73, B4J73DL, B4J74, B4J74DL, B4J75, B4J75RXDL, B4J76, B4J76DL, B4J77, B4J77DL, B4J78, B4J78DL, B4J78MS, B4J78MSD

B) **Field or rinse blank contamination:**

Not applicable.

6. **CALIBRATION:**

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) **Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):**

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 15% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

The following analytes in the sample shown were qualified for %RSD and %D:

The following aroclor samples are associated with an opening or closing CCV with % Difference exceeding criteria. Detected compounds are qualified J. Nondetected compounds are qualified UJ.

Decachlorobiphenyl AR16603I2

ABLK54, B4J74RX, B4J74RXDL, B4J75RX, B4J75RXDL, B4J76DL, B4J76RX, B4J76RXDL, B4J77RX, B4J77RXDL, B4J78RX, B4J78RXDL, B4J78RXMS, B4J78RXMSD

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

7. **COMPOUND IDENTIFICATION:**

A) **PCB Fraction:**

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract.

The following aroclor samples have percent differences between analyte results in the range of 26-

70%. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1260 B4J78RXMSD

Aroclor-1254 B4J68RX, B4J70RX, B4J73RX, B4J78DL, B4J78RX

The following aroclor samples have percent differences between analyte results in the range of 71-100%. Detected compounds are qualified JN. Nondetected compounds are not qualified.

Aroclor-1016 B4J78RXMSD

The following aroclor samples have percent differences between analyte results in the range of 101-200%. Detected compounds are qualified J. Nondetected compounds are not qualified.

Aroclor-1016 B4J78MS, B4J78MSD, B4J78RXMS

8. CONTRACT PROBLEMS NON-COMPLIANCE:

Method Blank has analyte concentrations above the quantitation limit (CRQL).

9. FIELD DOCUMENTATION:

10. OTHER PROBLEMS:

Aroclors, other than those reported may be present in some of the samples.

All samples were re-extracted outside hold time. They were reanalyzed and most of them were reanalyzed at the dilution.

11. This package contains re-extracted, re-analyzed or dilution runs. Upon reviewing the QA results, the following Form 1(s) are identified NOT to be used.

B4J68DL, B4J68RX, B4J68RXDL, B4J69DL, B4J69RX, B4J69RXDL, B4J70DL, B4J70RX, B4J70RXDL, B4J71DL, B4J71RX, B4J71RXDL, B4J72DL, B4J72RX, B4J72RXDL, B4J73DL, B4J73RX, B4J73RXDL, B4J74DL, B4J74RX, B4J74RXDL, B4J75DL, B4J75RX,B4J75RXDL, B4J76DL, B4J76RX, B4J76RXDL, B4J77DL, B4J77RX, B4J77RXDL, B4J78DL, B4J78RX, B4J78RXDL.

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.2

Prepared by: George Karras — Date: 8/13/07
George Karras, Chemist
Hazardous Waste Support Section

Peer Reviewed by: Russell Arnone — Date: 10/3/07
Russell Arnone, Chemist
Hazardous Waste Support Section

Concurred by: Linda M. Mauel — Date: 10/9/07
Linda Mauel, Chief
Hazardous Waste Support Section

Approved by: Robert Runyon — Date: 10/10/07
Robert Runyon, Chief
Hazardous Waste Support Branch

Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

TABLE OF CONTENTS

INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.2, February 2007". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, July 2007". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.2 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 LAB: SHEALY

SITE NAME: Cornell Dubilier SDG No(s).: B4J68

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? ☑ ___ ___

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? ☑ ___ ___

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ___ ☑ ___

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? ☑ ___ ___

	YES	NO	N/A
2.3 Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?		☑	

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

3.1 Is the SDG Narrative or Cover Letter Present?	☑		
3.2 Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	☑		
3.3 Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	☑		
3.5 Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	☑		
3.6 Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	☑		

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

YES NO N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative? [✓] ___ ___

b. Are all forms and copies legible? [✓] ___ ___

c. Assembled in the order set forth in the SOW? [✓] ___ ___

d. All Aroclor Data present? [✓] ___

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded? [✓] [ ] ___

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? ☑ ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	[✓]	___	___
ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.			
3.3 Were outliers marked with an asterisk on Form II?	[✓]	___	___
ACTION: Circle all outliers with a red pencil.			
If yes, were effected samples re-analyzed?	[✓]	___	___
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest.			
Were any outliers marked with an asterisk on Form VIII ARO?	[✓]	[ ]	___
ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:			

Surrogate Compound Recovery Action for Aroclors

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	J	Use Professional Judgement
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ [ ] [✓]

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? [✓] ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? [✓] ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	J	Use professioan judgement
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification	

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? ✓ ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? ✓ ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? ✓ ___ ___

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? ✓ ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) ✓ ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

	YES	NO	N/A

Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.

5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument? [✓] [ ] [ ]

ACTION: Use professional judgement to determine the effect on the data.

5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL? [ ] [✓] [ ]

ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte? [✓] [ ] [ ]

Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.

ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.

6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs? [ ] [✓] [ ]

ACTION: Take the action specified in section 6.1.

6.3 Do any field/rinse blanks have positive Aroclor results? [ ] [ ] [✓]

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [ ] ___ [✓]

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) [✓] ___ ___

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	[✓]	___	___
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	[✓]	___	___
d.) Form VII ARO/Aroclor Calibration Verification	[✓]	___	___
e.) Form VIII ARO/Aroclor Analytical Sequence	[✓]	___	___
f.) Form X ARO/Identification Summary for Multicomponent Analysis	[✓]	___	___

7.2 **Initial Calibration**

7.2.1 Was the following contract required initial calibration sequence provided by the laboratory? [✓] ___ ___

Initial Calibration Sequence	
1.	Aroclor 1221 CS3 (400ng/ml)
2.	Aroclor 1232 CS3 (400 ng/ml)
3.	Aroclor 1242 CS3 (400 ng/ml)
4.	Aroclor 1248 CS3 (400 ng/ml)
5.	Aroclor 1254 CS3 (400 ng/ml)
6.	Aroclor 1262 CS3 (400 ng/ml)
7.	Aroclor 1268 CS3 (400 ng/ml)
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

7.3 Are there any transcription/calculation errors between raw data and the Forms? ___ [ ] [✓]

ACTION: If large errors exist, take action specified in section 3.1 above.

YES NO N/A

7.4 Mean Retention Time (RT) and RT Window

Were the following mean RT and RT window met: ☑ ___ ___

a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors

b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.

ACTION: If no, follow the action as specified in section 3.1.

7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale? ☑ ___ ___

ACTION: IF no, take action as specified in section 3.1.

7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range? ☑ ___ ___

7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates? ☑ ☒ ___ 02/15/08

ACTION: If no, take action as specified in the following Table.

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 **Continuing Calibration Verification (CCV) (Form VII)**

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? [ ] ✓ ___

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ☑ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ☑ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ☑ ___ ___

	YES	NO	N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? ☑ ___ ___

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? ☑ ___ ___

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? [ ] ___ ✓

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? [ ] ✓ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? ☑ ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: ☑ ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows, but was reported as

YES NO N/A

non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.

11.3 Are there any transcription/calculation errors in Form I and Form X ARO? [ ] ✓

ACTION: Take action as specified in section 3.1 above.

11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns? ✓

11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract? [ ] ✓

NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.

11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%?

[ ] ✓

Action: Reviewer must check columns for peak interferences for the positive hits. Qualify the Arclor (s) according to the following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"

YES NO N/A

> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per column & analysis)? [✓] ___ ___

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? [✓] ___ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? [ ] ___ [✓]

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? [✓] ___ ___

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use.

YES NO N/A

Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? * ☑ ___ ___
RAW DATA NOT PROVIDED, COULD NOT CHECK WITH RAW DATA
Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? ☑ ___ ___

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.2,February 2007.
2. National Functional Guidelines for Superfund Organic Methods Data Review July 2007.

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.2

Prepared by: George Karras Date: 8/13/07
George Karras, Chemist
Hazardous Waste Support Section

Peer Reviewed by: Russell Arnone Date: 10/3/07
Russell Arnone, Chemist
Hazardous Waste Support Section

Concurred by: Linda M. Mauel Date: 10/9/07
Linda Mauel, Chief
Hazardous Waste Support Section

Approved by: Robert Runyon Date: 10/10/07
Robert Runyon, Chief
Hazardous Waste Support Branch

Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by; _____ Date: _____
Name

TABLE OF CONTENTS

INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.2, February 2007". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, July 2007". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.2 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 LAB: Shealy Environmental

SITE NAME: Cornell Dubilier SDG No(s).: B4J48

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? ☑ ___ ___

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? ☑ ___ ___

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ___ ☑ ___

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? ☑ ___ ___

	YES	NO	N/A
2.3 Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?		☑	

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

3.1 Is the SDG Narrative or Cover Letter Present?	☑		
3.2 Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	☑		
3.3 Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	☑		
3.5 Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	☑		
3.6 Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	☑		

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

YES NO N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative? [✓] ___ ___

b. Are all forms and copies legible? [✓] ___ ___

c. Assembled in the order set forth in the SOW? [✓] ___ ___

d. All Aroclor Data present? [✓] ___

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded? ✓ [ ] ___

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? ☑ ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	☑		
ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.			
3.3 Were outliers marked with an asterisk on Form II?	☑		
ACTION: Circle all outliers with a red pencil.			
If yes, were effected samples re-analyzed?	☐		☑
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest.			
Were any outliers marked with an asterisk on Form VIII ARO?		☑	
ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:			

Surrogate Compound Recovery Action for Aroclors

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	J	Use Professional Judgement
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ [ ] ✓

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? [ ] ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? [ ] ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	J	Use professioan judgement
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification	

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? [✓] ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? [✓] ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? [ ] ___ [✓]

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? [✓] ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) [✓] ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

	YES	NO	N/A

Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.

5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL? [✓] ___ ___

ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte? ___ [✓] ___

Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.

ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.

6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs? ___ [✓] ___

ACTION: Take the action specified in section 6.1.

6.3 Do any field/rinse blanks have positive Aroclor results? ___ [✓] ___

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) [✓] ___ ___

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	[✓]	___	___
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	[✓]	___	___
d.) Form VII ARO/Aroclor Calibration Verification	[✓]	___	___
e.) Form VIII ARO/Aroclor Analytical Sequence	[✓]	___	___
f.) Form X ARO/Identification Summary for Multicomponent Analysis	[✓]	___	___

7.2 **Initial Calibration**

7.2.1 Was the following contract required initial calibration sequence provided by the laboratory? [✓] ___ ___

Initial Calibration Sequence	
1.	Aroclor 1221 CS3 (400ng/ml)
2.	Aroclor 1232 CS3 (400 ng/ml)
3.	Aroclor 1242 CS3 (400 ng/ml)
4.	Aroclor 1248 CS3 (400 ng/ml)
5.	Aroclor 1254 CS3 (400 ng/ml)
6.	Aroclor 1262 CS3 (400 ng/ml)
7.	Aroclor 1268 CS3 (400 ng/ml)
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

7.3 Are there any transcription/calculation errors between raw data and the Forms? ___ [ ] [✓]

ACTION: If large errors exist, take action specified in section 3.1 above.

YES NO N/A

7.4 Mean Retention Time (RT) and RT Window

Were the following mean RT and RT window met: [✓] ___ ___

a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors

b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.

ACTION: If no, follow the action as specified in section 3.1.

7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale? [✓] ___ ___

ACTION: IF no, take action as specified in section 3.1.

7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range? [✓] ___ ___

7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates? [✓] ___ ___

ACTION: If no, take action as specified in the following Table.

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 **Continuing Calibration Verification (CCV) (Form VII)**

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? [ ] ✓ —

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ☑ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ☑ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ☑ ___ ___

YES NO N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? [ ] ___ ✓

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? [✓] ___ ___

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? [ ] ___ ✓

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? ☑ ___ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? [✓] ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: [✓] ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows, but was reported as

	YES	NO	N/A
non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.			
11.3 Are there any transcription/calculation errors in Form I and Form X ARO?		[ ]	✓
ACTION: Take action as specified in section 3.1 above.			
11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns?	✓		
11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract?		✓	
NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.			
11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%?		✓	

[ ]

Action: Reviewer must check columns for peak interferences for the positive hits. Qualify the Arclor (s) according to the following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"

YES NO N/A

> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per column & analysis)? [✓] ___ ___

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? [✓] ___ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? [ ] ___ [✓]

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? [✓] ___ ___

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use.

YES NO N/A

Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? ☑ ___ ___

Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? ☑ ___ ___

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.2,February 2007.
2. National Functional Guidelines for Superfund Organic Methods Data Review July 2007.

SOP NO. HW-37/Aroclor
Validation of Data
USEPA Contract Laboratory Program
Statement of Work for Organic Analysis of Low/Medium Concentration of Aroclor Organic Compounds SOM01.2

Prepared by: George Karras Date: 8/13/07
George Karras, Chemist
Hazardous Waste Support Section

Peer Reviewed by: Russell Arnone Date: 10/3/07
Russell Arnone, Chemist
Hazardous Waste Support Section

Concurred by: Linda M. Mauel Date: 10/9/07
Linda Mauel, Chief
Hazardous Waste Support Section

Approved by: Robert Runyon Date: 10/10/07
Robert Runyon, Chief
Hazardous Waste Support Branch

Annual Review

Reviewed by: _____ Date: _____
Name

Reviewed by: _____ Date: _____
Name

TABLE OF CONTENTS

INTRODUCTION

Scope and Applicability

This SOP offers detailed guidance in evaluating laboratory data generated according to the method in the "USEPA Contract Laboratory Program Statement of Work for Organics Analysis Multi-Media, Multi-Concentration, SOM01.2, February 2007". The validation procedures and actions discussed in this document are based on the requirements set forth in the "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, July 2007". This document attempts to cover technical problems specific to low/Medium concentration of Aroclor compounds. Situations may arise where data limitations must be assessed based on the reviewer's own professional judgement.

In addition to technical requirements, contractual requirements may also be covered in this document. While it is important that instances of contract non-compliance be addressed in the Data Assessment, the technical criteria are always used to qualify the analytical data.

Summary

To ensure a thorough evaluation of each result in a data case, the reviewer must complete the checklist within this SOP, answering specific questions while performing the prescribed "ACTIONS" in each section. Qualifiers (or flags) are applied to questionable or unusable results as instructed. The data qualifiers discussed in this document are as follows:

Data Qualifiers

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

JN - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Lab Qualifiers:

D - The positive value is the result of an analysis at a secondary dilution factor.

B - The analyte is present in the associated method blank as well as in the sample. This qualifier has a different meaning when validating inorganic data.

E - The concentration of this analyte exceeds the calibration range of the instrument.

P - Pesticide/Aroclor target analytes when the % Difference between the analyte concentrations obtained from the two dissimilar GC columns is greater than 25%.

The reviewer must prepare a detailed data assessment to be submitted along with the completed SOP checklist. The Data Assessment must list all data qualifications, reasons for qualifications, instances of missing data and contract non-compliance.

Reviewer Qualifications:

Data reviewers must possess a working knowledge of the USEPA Statement of Work SOM01.2 and National Functional Guidelines mentioned above.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER: 37088 **LAB:** Shealy Env

SITE NAME: Cornell Dubilier **SDG No(s).:** B4HT9

1.0 Chain of Custody and Sampling Trip Reports

1.1 Are the Traffic Reports/Chain-of-Custody Records present for all samples? ☑ ☐ ☐

ACTION: If no, contact RSCC, or the TOPO to obtain replacement of missing or illegible copies from the lab.

1.2 Is the Sampling Trip Report present for all samples? ☑ ☐ ☐

ACTION: If no, contact either RSCC or ask the TOPO to obtain the necessary information from the prime contractor.

2.0 Data Completeness and Deliverables

2.1 Have any missing deliverables been received and added to the data package? ☐ ☑ ☐

ACTION: Contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the lab. If lab cannot provide them, note the effect on the review of the data package in the Contract Problems/Non-compliance section of the Data Assessment.

2.2 Was SMO/CLASS CCS checklist included with the package? ☑ ☐ ☐

	YES	NO	N/A
2.3 Are there any discrepancies between the Traffic Reports/Chain-of-Custody Records, and Sampling Trip Report?		✓	

ACTION: If yes, contact the TOPO to obtain an explanation or resubmittal of any missing deliverables from the laboratory.

3.0 Cover Letter SDG Narrative

3.1 Is the SDG Narrative or Cover Letter Present?	✓		
3.2 Are case number, SDG number and contract number contained in the SDG Narrative or cover letter (see SOW, Exhibit B, section 2.5.1)? EPA sample numbers in the SDG, detailed documentation of any quality control, sample, shipment, and/or analytical problems encountered in processing the samples? Corrective action taken?	✓		
3.3 Does the Narrative contain the following information SOM01.1, page B-12, section 2.5.1)? column used, storage of samples, case#, SDG#, analytical problems, and discrepancies between field and lab weights.	✓		
3.5 Did the contractor record the temperature of the cooler on the Form DC-1, Item 9 - Cooler Temperature, and in the SDG Narrative?	✓		
3.6 Does the Case Narrative contain the "verbatim" statement (page B-12, section 2.5.1 of the SOM)?	✓		

ACTION: If "No", to any question in this section, contact the TOPO to obtain necessary resubmittals. If unavailable, document under the Contract Problems/ Non-Compliance section of the Data Assessment.

YES NO N/A

4.0 Data Validation Checklist

4.1 Check the package for the following (see SOM reporting requirements, section 2.1, page B-10):

a. Is the package paginated in ascending order starting from the SDG narrative? [✓] ___ ___

b. Are all forms and copies legible? [✓] ___ ___

c. Assembled in the order set forth in the SOW? [✓] ___ ___

d. All Aroclor Data present? [✓] ___

PART A: Low/Medium Aroclor Analyses

1.0 Sample Conditions/Problems

1.1 Do the Traffic Reports/Chain-of-Custody Records, Sampling Trip Report or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If samples were not iced or the ice was melted upon arrival at the laboratory and the temperature of the cooler was > 10° C, then flag all positive results with a "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any Aroclor technical holding times, determined from date of collection to date of analysis, been exceeded? [✓] [ ] ___

2.2 Preservation: Aqueous and Non-aqueous samples must be cooled at 4°C ± 2°C.

YES NO N/A

ACTION: Qualify sample results according to the following table.

Holding Time Actions for Low/Medium Aroclor Analyses

Matrix	Preserved	Criteria	Action	
			Detected Associated Compounds	Non-Detected Associated Compounds
Aqueous	No	≤ 7 days (extraction) < 40 days (analysis)	J*	UJ*
	No	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 7 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 7 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R
Non-aqueous	No	≤ 14 days (extraction) ≤ 40 days (analysis)	J*	UJ*
	No	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes	≤ 14 days (extraction) ≤ 40 days (analysis)	No qualification	
	Yes	> 14 days (extraction) > 40 days (analysis)	J	UJ
	Yes/No	> 28 Days (extraction)	J	R

* Only if cooler temperature exceeds 10°C (see ACTION in Section 1.1 above). No action required if temperature ≤ 10°C.

3.0 Surrogate Recovery (Form II ARO-1, Form II ARO-2, Form VIII ARO)

3.1 Are the Aroclor Recovery Summary Forms present? ✓ ___ ___

ACTION: Contact the TOPO to obtain an explanation/resubmittal from the lab. If missing deliverables are unavailable, document the effect in the Data Assessment.

	YES	NO	N/A
3.2 Were the two surrogates, tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) added to all samples, MS/MSD, LCS, blanks including standards?	✓		

ACTION: If no, use professional judgment in qualifying data as missing surrogate analyte may not directly apply to target analytes.

3.3 Were outliers marked with an asterisk on Form II?	✓		
ACTION: Circle all outliers with a red pencil.			
If yes, were effected samples re-analyzed? * Sample B4HW5 was not Re-analyzed	[ ]	✓*	
3.4 The RTs of the surrogates in each mid-point Aroclor standards used for continuing calibration verification, all samples, including MS/MSD, LCS and all blanks must be within the calculated RT window. TCX must be within ± 0.05 minutes and DCB must be within ± 0.10 minutes of the mean retention time (RT) determined from the initial calibration and tabulated in Form VIII Pest.			
Were any outliers marked with an asterisk on Form VIII ARO? *This was for the DL samp so no need to Qualify	✓*	[ ]	

ACTION: Circle all outliers with a red pencil. If any Surrogate is outside the required limits, qualify their associated target compounds (See Table below) as follows:

Surrogate Compound Recovery Action for Aroclors

Criteria	Action	
	Detected Target Compounds	Non-Detected Target Compounds
%R > 200%	J	No qualification
150% < %R ≤ 200%	J	No qualification
30% ≤ %R ≤ 150%	No qualification	
10% ≤ %R < 30%	J	UJ
%R < 10% (sample dilution not a factor)	J	R
%R < 10% (sample dilution is a factor)	J	Use Professional Judgement
RT out of RT window	Use professional judgment	
RT within RT window	No qualification	

YES NO N/A

Note: Blank analysis having surrogates out of specification:

The reviewer must give special consideration to the validity of associated samples. Basic concern is whether the blank problems represent an isolated problem with the blank alone or whether there is a fundamental problem with the analytical process. For example, if one or more samples in the batch show acceptable surrogate recoveries, the reviewer may choose to consider the blank problem to be an isolated occurrence.

ACTION: Note in the Data Assessment under Contract Problems/ Non-Compliance if the Lab did not perform reanalysis and reviewer's judgment regarding blank problem.

3.5 Are there any transcription/calculation errors between raw data and Form IIs? ___ [ ] ✓

ACTION: If large errors exist, ask the TOPO to obtain an explanation/resubmittal from the lab, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spike/Matrix Spike Duplicate Recovery (Form III)

Note: Data for MS/MSD will not be present unless requested.

4.1 Are the MS/MSD Recovery Forms (Form III ARO) present? [✓] ___ ___

4.2 Was the MS/MSD analyzed at the required frequency (once per SDG, or every 20 samples, whichever is more frequent)? [✓] ___ ___

ACTION: If any MS/MSD data are missing, take action as specified in section 3.1 above.

ACTION: No action is taken on MS/MSD data alone. However, using professional judgement, the validator may use the MS and MSD results in conjunction with other QC criteria and determine the need for some qualification of the data. If Any MS/MSD % recovery or RPD is out of specification, qualify data to include the consideration of the existence of interference in the raw data. Consideration include, but not limited to the following "Action":

Matrix Spike/Matrix Spike Duplicate Action for Aroclor

Criteria	Action	
	Detected Spike Compounds	Non-detected Spike Compounds
%R or RPD > Upper Acceptance Limit	J	No qualification
20% ≤ %R < Lower Acceptance Limit	J	UJ

YES NO N/A

%R < 20%	J	Use professioan judgement
Lower Acceptance Limit ≤ %R; RPD ≤ Upper Acceptance Limit	No qualification	

Note: If it can be determined that the results of the MS/MSD affects only the sample spiked, limit qualification to only this sample. However, use professional judgment when it is determined through the MS/MSD results that the laboratory is having systematic problem in the analysis of one or more analytes that affect all associated samples.

5.0 Blanks (Form IV)

5.1 Is the Aroclor Method Blank Summary (Form IV ARO) present for aqueous and soil samples? [✓] ___ ___

5.2 Frequency of Analysis: For the analysis of AROCLOR, has a method blank been analyzed for each SDG or every 20 samples, whichever is more frequent? [✓] ___ ___

ACTION: If any blank data are missing, take action as specified above in section 3.1. If blank data is not available, reject "R" all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 A separate Form IV should be present if part of an extraction batch required sulfur removal. In such cases some samples will be listed on two blank summary forms - once under the method blank, and once under the sulfur clean-up blank (PCBLK). Was this additional blank raw data and Form IV submitted when required? [ ] ___ [✓]

ACTION: If Form IV sulfur clean-up blank is missing, take action as specified in section 3.1 above.

5.4 Has a Aroclor instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence (minimum contract requirement)? [✓] ___ ___

ACTION: If any blank data are missing, take action specified in Section 3.1.

5.5 Was the correct identification scheme used for all Aroclor blanks? (See page B-39, section 3.3.7.3 of SOM01.1 for further information) [✓] ___ ___

ACTION: Contact the TOPO to obtain resubmittals or make the required corrections on the forms.

YES NO N/A

Document in the Data Assessment under Contract Problems/Non-Compliance all corrections made by the validator.

5.6 Chromatography: Review the blank raw data chromatogram, quant. Reports and data system printout. Is the chromatographic performance (baseline stability) acceptable for each instrument? [ ] ✓ ___

ACTION: Use professional judgement to determine the effect on the data.

5.7 Are all detected hits for target compounds in method, and field blanks less than the CRQL? ✓ ___ ___

ACTION: IF no, an explanation and laboratory's corrective actions must be addressed in the case SDG narrative. Contact TOPO to request from Lab. revised narrative and make a note in the Contract Problems/Non-Compliance section of the Data Assessment.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/reagent or cleanup blanks contain positive hits for target Aroclor compounds with values greater than the CRQL for that analyte? ✓ [ ] ___

Note: The concentration of each target compound in the instrument blank must be less than the CRQL for that analyte.

ACTION: Make note in data assessment under Contract Problems/Non-Compliance if any blank contains hit above the CRQLs.

6.2 Do any instrument blanks contain positive Aroclor results with values greater than CRQLs? ✓ [ ] ___

ACTION: Take the action specified in section 6.1.

6.3 Do any field/rinse blanks have positive Aroclor results? ___ [ ] ✓

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify results due to contamination. Use the largest value from all the associated

YES NO N/A

blanks. If any blanks are grossly contaminated, all associated sample data should be qualified unusable (R).

Blank Action for Aroclor Analyses

Blank Type	Blank Result	Sample Result	Action for Samples
Method, Field, Sulfur Cleanup, Instrument	Detects	Not detected	No qualification required
	< CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	= CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL	No qualification required
	> CRQL	< CRQL	Report CRQL value with a U
		≥ CRQL and < blank contamination	Report concentration of sample with a U
		≥ CRQL and ≥ blank contamination	No qualification required
	Gross contamination	Detects	Qualify results as unusable R

NOTE: Analytes qualified "U" for blank contamination are treated as "hits" when qualifying for calibration criteria.
Note: When applied as described in the table above, the contaminant concentration in the blank are multiplied by the sample dilution factor.

6.4 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ __

ACTION: Note in data assessment if there's no associated field/rinse/equipment blank.

Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Aroclor Initial and Continuing Calibration

7.1 Are the following Forms, chromatograms and data system printouts present?

a.) Form VI ARO-1/Aroclor Initial Calibration (Multipoint) ✓ __ __

	YES	NO	N/A
b.) Form VI ARO-2/Aroclor Initial Calibration (Multipoint)	[✓]	___	___
c.) Form VI ARO-3/Aroclor Initial Calibration(Singlepoint)	[✓]	___	___
d.) Form VII ARO/Aroclor Calibration Verification	[✓]	___	___
e.) Form VIII ARO/Aroclor Analytical Sequence	[✓]	___	___
f.) Form X ARO/Identification Summary for Multicomponent Analysis	[✓]	___	___

7.2 **Initial Calibration**

7.2.1 Was the following contract required initial calibration sequence provided by the laboratory?	[✓]	___	___

Initial Calibration Sequence	
1.	Aroclor 1221 CS3 (400ng/ml)
2.	Aroclor 1232 CS3 (400 ng/ml)
3.	Aroclor 1242 CS3 (400 ng/ml)
4.	Aroclor 1248 CS3 (400 ng/ml)
5.	Aroclor 1254 CS3 (400 ng/ml)
6.	Aroclor 1262 CS3 (400 ng/ml)
7.	Aroclor 1268 CS3 (400 ng/ml)
8.	Aroclor1016/1260 (100 ng/ml) CS1
9.	Aroclor1016/1260 (200 ng/ml) CS1
10.	Aroclor1016/1260 (400 ng/ml) CS1
11.	Aroclor1016/1260 (800 ng/ml) CS1
12.	Aroclor1016/1260 (1600 ng/ml) CS1
13.	Instrument Blank

ACTION: If initial calibration is not performed or not performed in the proper sequence, notify the TOPO and make a note in the data assessment.

7.3 Are there any transcription/calculation errors between raw data and the Forms?	___	[ ]	[✓]

ACTION: If large errors exist, take action specified in section 3.1 above.

YES NO N/A

7.4 Mean Retention Time (RT) and RT Window

Were the following mean RT and RT window met: [✓] ___ ___

a.) The mean RT of each of the three to five major peaks were determined from the five-point initial calibration for all Aroclors

b.) RT window was calculated as ± 0.07 for each of the three to five major peaks and ± 0.05 and ± 0.10 for the surrogates tetrachloro-m-xylene and decachlorobiphenyl, respectively.

ACTION: If no, follow the action as specified in section 3.1.

7.5 Was at least one chromatogram from each of the Aroclor standards yield peaks that give deflection between 50-100% of full scale? [✓] ___ ___

ACTION: IF no, take action as specified in section 3.1.

7.6 Was the mean Calibration Factor (CF) calculated for the three to five major peaks of each Aroclor, as well as for the surrogates, over the initial calibration range? [✓] ___ ___

7.7 Were the Percent Relative Standard Deviation (%RSD) of the Calibration Factor for the three to five major peaks < 20% of each of the Aroclor compounds and surrogates? [✓] ___ ___

ACTION: If no, take action as specified in the following Table.

Initial Calibration Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
Initial calibration is not performed or not performed in proper sequence	Use Professional Judgment and notify Contract Lab Program (CLP) Project Officer	
%RSD exceeds allowable limits *	J	UJ
%RSD within allowable limits *	No qualification	

* %RSD < 20.0% for Aroclors and surrogates (tetrachloro-m-xylene and decachlorobiphenyl.

7.8 **Continuing Calibration Verification (CCV) (Form VII)**

Were the Absolute Retention Time (RT) for each Aroclor and surrogate in the mid-point concentration (CS3) of

YES NO N/A

the Standard used for CCV must be within the RT window determined from the initial calibration?

7.9 For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, the Percent Difference (%D) between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±15.0%.

7.10 For a closing CCV, the %D between the CF of each of the three to five peaks used to identify an Aroclor and surrogates in the mid-point concentration (CS3) of the Aroclor standards and the CF from the initial calibration must be within ±50.0%.

7.11 No more than 14 hours may elapse from the injection of the instrument Blank that begins an analytical sequence (opening CCV) and the injection of the last mid-point concentration (CS3) of the Aroclor standards that ends an analytical sequence (closing CCV).

7.12 No more than 12 hours may elapse from the injection of the instrument blank that begins an analytical sequence (opening CCV and the injection of the last sample or blank that is part of the same analytical sequence.

Were sections 7.8 to 7.12 met? [ ] [✓]

ACTION: If no, use the following table to qualify Aroclor data:

Continuing Calibration Verification (CCV) Action for Aroclor Analyses

Criteria	Action	
	Detected Associated Compounds	Non-Detected Associated Compounds
RT out of RT Window	Use professional Judgment *	
Percent Difference not within limits ± 15% as specified in section 7.9 above	J	UJ
Percent Difference not within limits ± 50% as specified in section 7.10 above	J	UJ
Time elapsed is greater than acceptable limits as specified in section 7.11 & 7.12 above	R	
Percent Difference, time elapsed and RT are within acceptable limits	No qualification	

YES NO N/A

* For non-detected target compounds in the affected samples, check to see if the sample chromatogram contain any peak that are close to the expected RT window of the Aroclor of interest.

If no peaks are present, consider the non-detected values to be valid and no qualification of the data is necessary.

If any peaks are present close to the expected RT window of the Aroclor of interest, qualify the non-detected values as presumptively present "N".

For detected compounds in the affected samples, if the peaks are within the RT window, no qualification of the data is necessary. If the peaks are close to the expected RT window of the Aroclors of interest, the reviewer may take additional effort to determine if sample peaks represent the compound of interest.

For example, the reviewer can examine the data package for the presence of three or more standards containing the Aroclor of interest that were run within the analytical sequence during which the sample was analyzed. If three or more such standards are present, the RT window can be re-evaluated using the mean RT of the standards.

If the peaks in the affected sample fall within the revised window, qualify the detected Aroclor as "JN".

If the reviewer cannot do anything with the data to resolve the problem of concern, qualify all non-detects as unuseable "R".

8.0 Analytical Sequence Check (Form VIII-ARO)

8.1 Is Form VIII-Pest present and complete for each column and each period of analyses? ✓ ___ ___

ACTION: If no, take action as specified in section 3.1

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses, and all standards analyzed at the required frequency for each GC/ECD instrument used? ✓ ___ ___

ACTION: If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Generally, the effect is negligible unless the sequence was grossly altered and/or the calibration was out of QC limits.

8.3 Are the surrogate retention time (RT) from the initial calibration for TCX and DCB provided on Form VIII-Pest? ✓ ___ ___

YES NO N/A

ACTION: If no, take action as specified in section 3.1

8.4 Was the asterisk (*) applied to the RT of any blanks, samples, standards, MS/MSD, and LCS that did not meet the QC Limits of ± 0.05 minutes for TCX (tetrachloro-m-xylene) and ± 0.10 minutes for DCB (decachlorobiphenyl)? [ ] ___ ✓

ACTION: If any data are missing, take action specified in 3.1 above.

If no, use professional judgment to determine the severity of the effect on the data and qualify accordingly. Document in the data assessment under Contract Problems/Non-Compliance.

9.0 Sulfuric Acid and Gel Permeation Chromatography (GPC) Cleanup Procedures

9.1 Was sulfuric acid added to all extracts? [✓] ___ ___

Note: Sulfuric acid cleanup is mandatory for all extracts

ACTION: If no, take action specified in section 3.1

9.2 Gel Permeation Chromatography (GPC

GPC is an optional cleanup procedure for both aqueous and non-aqueous samples that contain high molecular weight compounds that interfere with Aroclor analysis.

9.3 If GPC cleanup was performed on samples, GPC calibration is acceptable if the two UV traces meet the following requirements.

a. Peaks must be observed and should be symmetrical for all compounds in the calibration solution.

b. Corn oil and phthalate peaks should exhibit greater than 85% resolution.

c. The phthalate and Methoxychlor peaks should exhibit greater than 85% resolution.

d. Methoxychlor and perylene peaks should exhibit greater than 85% resolution.

e. Perylene and sulfur peaks must be saturated and should exhibit greater than 90% baseline resolution.

YES NO N/A

f. The RT shift is less than 5% between UV traces for bis(2-ethylhexylphthalate and perylene.

9.4 Were all above criteria met? [ ] ___ ✓

ACTION: If no, examine the raw data for the presence of high molecular weight contaminants. Examine the subsequent sample data for unusual peaks and use professional judgment in qualifying the data.

10.0 Laboratory Control Samples (LCSs)

10.1 LCSs provide information on the accuracy of the analytical method and laboratory performance.

Aroclor Laboratory Control Sample Recovery - Aqueous and Non-Aqueous

Compound	% Recovery QC Limits
Aroclor 1016	50 - 150
Aroclor 1260	50 - 150
Tetrachloro-m-xylene (surrogate)	30 - 150
Decachlorobiphenyl (surrogate)	30 - 150

10.2 Were the above recoveries met? [ ] ✓ ___

ACTION: If no, qualify the sample data as follows:

Criteria	ACTION	
	Detected Associated Compound	Non-Detected Associated Compound
%R> Upper Acceptance Limit	J	No qualification
%R< Lower Acceptance Limit	J	R
Lower Acceptance Limit < %R < Upper Acceptance Limit	No qualification	

YES NO N/A

11.0 Aroclor Identification (Form X ARO/Identification Summary for Multicomponent Analysis

11.1 Is Form X (ARO) complete for every sample in which Aroclor was detected? ☑ ___ ___

ACTION: Take action as specified in section 3.1 above.

11.2 The identification of a Multi component Aroclor by GC method is based primarily on RT data and pattern recognition. Were the following requirements met: ☑ ___ ___

a.) A Minimum of 3 major peaks were selected for each Aroclor. If more than one Aroclor is observed in a sample, a peak common to other Aroclor(s) must not be used to quantitate other Aroclor. Lab must choose different peaks to quantitate each Aroclor.

b.) If a chromatogram is replotted electronically to meet these requirements, the scaling factor used must be displayed on the chromatogram, and both the initial chromatogram and the replotted chromatogram must be submitted in the data package.

c.) The Retention Time (RT) of both of the surrogates and reported target compounds must be within the calculated RT window of both columns.

d.) When no analytes are identified in the sample, the chromatograms of the sample extract must use the same scaling factor used for the low-point standard of the initial calibration associated with those samples.

e.) Chromatogram must display the largest peak of any Aroclor detected in the sample at less than full scale.

f.) If an extract must be diluted, chromatograms must display Aroclor peaks between 25-100% of full scale.

ACTION: If retention times (RT) or peak apex cannot be verified, contact TOPO to obtain rescaled chromatograms from the lab.

If data reviewer identifies a peak in both GC columns that fall within the appropriate RT windows, but was reported as

YES NO N/A

non-detect, the compound may be false negative. If necessary, contact TOPO to instruct laboratory to re-evaluate the chromatograms.

11.3 Are there any transcription/calculation errors in Form I and Form X ARO? ___ [ ] ✓

ACTION: Take action as specified in section 3.1 above.

11.4 Are the RTs of Aroclor peaks within the established RT window for analyses on both columns? [ ] ✓ ___ ___

11.5 Was the GC/MS confirmation provided for Aroclor concentration > 10 ug/ml in final extract? [ ] ___ ✓

NOTE: Laboratory is required to contact SMO to determine if GC/MS confirmation is required. Check the semivolatile TIC data for presence of Aroclors.

11.6 Is the per cent difference (%D) calculated for positive results on both columns < 25%?

[ ] ✓ ___

Action: Reviewer must check columns for peak interferences for the positive hits. Qualify the Arclor (s) according to the following Table:

Action on Qualifying Positive Aroclor Results

Percent Differences	Qualifier
0 - 25%	None
26 - 70%	"J"
71 - 100%	"JN"
101 - 200% (No Peak Interferences)	"R"
101 - 200% (Interferences detected)*	"JN"

YES NO N/A

> 50% (Aroclor value < CRQL)**	"U"
> 200%	"R"

* When interferences is detected on either column, qualify the data as "JN"

** When the Aroclor value is below CRQL and %D > 50%, raise the value to CRQL and qualify "U", undetected.

12.0 Target Aroclor List (TCL)

12.1 Are the Aroclor Analysis Data Sheets (Form I ARO) present with required header information on each page for samples, MS/MSD (if required), method and instrument blanks (per column & analysis)? ☑ ___ ___

12.2 Is the chromatographic performance acceptable with respect to baseline stability, full-scale attenuation, peak shape/resolution? ☐ ☑ ___

ACTION: If no, take action specified in section 3.1 above.

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in the Form I results? Check at least two positive results. Were any errors found? ☐ ___ ☑

ACTION: If errors were found, take action as specified in section 3.1 above.

13.2 Are the contract required quantitation limits (CRQL) adjusted to reflect sample dilution? ☑ ___ ___

ACTION: If errors exist, take action as specified in section 3.1 above.

ACTION: When a sample is required to be diluted, the lowest CRQL is used (unless a QC exceedance dictates the use of the higher CRQL from the diluted sample). Replace concentration which exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with the result from the diluted sample. Specify which Form I to use.

YES NO N/A

Use a red pencil and draw a red "X" across the entire page of all Form I's that should not be used, including those in the data summary package.

At the top or bottom of the Forms, write with red pencil, "DO Not Use".

Note: If the sample dilution factor (DF) is greater than 10, an additional 10 times more concentrated than the diluted sample extract must be analyzed and reported with the sample data. If the DF is less or equal to 10, but greater than 1, the results of the original undiluted analysis must also be reported (see SOM01.1/section 10.3.3.4/page D-44/ARO).

ACTION: IF the above requirement was not met, contact the TOPO to obtain an explanation/resubmittal from the lab and make a note in the Data Assessment under Contract Problems/Non-Compliance section.

13.3 For non-aqueous samples, were the percent moisture < 70%? ☑ ___ ___

Action: If the % moisture ≥ 70.0% and < 90.0%, qualify detects as "J" and non-detects as approximated "UJ" If the % Moisture ≥ 90%, qualify detects as "J" and non-detects as "R"

14.0 Field Duplicates

14.1 Were any field duplicates submitted for Aroclor analysis? ☑ ___ ___

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. If large differences exist, contact the TOPO to confirm identification of field duplicates with the sampler.

YES NO N/A

YES NO N/A

Definitions

ARO - Aroclor
CCS - contract compliance screening
CF - Calibration Factor
CLASS - Contract Laboratory Analytical Services Support
CLP - Contract Laboratory Program
CRQL - Contract Required Quantitation Limit
GC/ECD - Gas Chromatography/Electron Capture Detector
kg - kilogram
µg - microgram
ℓ - liter
mℓ - milliliter
QC - quality control
RAS - Routine Analytical Services
RPD - Relative Percent Difference
RRF - Relative Response Factor
$\overline{RRF}$ - Average Relative Response Factor (from initial calibration)
RRT - Relative Retention Time
RSD - Relative Standard Deviation
RT - Retention Time
RSCC - Regional Sample Control Center
SDG - Sample Delivery Group
SOP - standard operating procedure
SOW - Statement of Work
TCL - Target Compound List
TCLP - Toxicity Characteristics Leachate Procedure
TIC - Tentatively Identified Compound
TPO - Technical Project Officer
VTSR - Validated Time of Sample Receipt
TOPO - Task Order Project Officer

YES NO N/A

References

1. USEPA Contract Laboratory Program of Work for Organic Analysis Multi-Media, Multi-Concentration, SOW/CLP/SOM01.2,February 2007.
2. National Functional Guidelines for Superfund Organic Methods Data Review July 2007.

Shealy Environmental Services, Inc.

Contract Number: EPW05031
Date: 01/21/2008

SDG Narrative

Case 37088
SDG B4J68

EPA Sample Numbers

EPA Sample Number	Aroclor Fraction	Dilution/ Reanalysis
B4J68	Yes	Yes
B4J69	Yes	Yes
B4J70	Yes	Yes
B4J71	Yes	Yes
B4J72	Yes	Yes
B4J73	Yes	Yes
B4J74	Yes	Yes
B4J75	Yes	Yes
B4J76	Yes	Yes
B4J77	Yes	Yes
B4J78	Yes	Yes
B4J78MS	Yes	Yes
B4J78MSD	Yes	Yes

Columns	Aroclor #1 DB-XLB 30m x 0.32mm x 0.50um Aroclor #2 DB-35MS 30m x 0.32mm x 0.25um
PEST/Aroclor Equation	Water sample concentration ug/L = $\frac{(A_x)(V_t)(DF)(GPC)}{(\overline{CF})(V_o)(V_i)}$ Soil sample concentration (ug/Kg) = $\frac{(A_x)(V_t)(DF)(GPC)}{(\overline{CF})(V_i)(W_s)(D)}$ Where A_x is the response (peak area) of the compound to be measured. $\overline{CF}$ is the mean calibration factor from the initial calibration (area/ng). DF is the dilution factor. GPC = V_{in}/V_{out} : GPC factor. V_{in} is the volume of extract loaded onto GPC column. V_{out} is the volume of extract collected after GPC cleanup. V_t is volume of the concentrated extract in uL. (If no GPC cleanup is performed, then V_t = 1000uL. If GPC cleanup is performed, then $V_t = V_{out}$.). V_i is the volume of the extract injected in uL. V_o: Volume of water extracted in mL. W_s is the weight of sample extracted in g.. D= $\frac{100 - \%Moisture}{100}$

Sample Receiving

The cooler temperatures associated with these samples were 4.2, 5.8, and 6.1°C.

When the laboratory's sample receiving department was documenting the cooler temperatures on the TR for the samples received on 12/19, all three temperatures were recorded on each page of the TR/COC. The laboratory's data entry system has the correct temperature recorded for several of the samples; however, samples B4J28 through B4J65 have two temperatures associated with them. These samples will have two temperatures on the

corresponding DC-1 forms. All of the temperatures are in range. Per Region 2, the laboratory's resolution is acceptable.

Aroclor Fraction

All samples in the SDG were extracted by the Automated Solvent Extractor (ASE). To ensure proper extraction, approximately 15 grams of sample were used for extraction. The final volume of the extract was brought to 5mL, instead of 10mL, so the CRQLs remain the same.

The surrogate decachlorobiphenyl (DCB) was manually integrated in several samples and standards due to improper baseline integration.

Manual integration was performed on aroclor 1248 on AR12483F1 due to incorrect auto integration.

Manual integration was performed on aroclor 1254 on AR12543F1 and AR12543FY due to incorrect auto integration.

Manual integration was performed on aroclor 1262 on AR12623F1 due to incorrect auto integration.

Manual integration was performed on aroclor 1268 on AR12683F1 due to incorrect auto integration.

Manual integration was performed on aroclor 1016 on AR16603FY due to incorrect auto integration.

All samples in this SDG were re-extracted due to method blank contamination in the initial analysis. The re-extracts were performed outside the holding time.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Robert Zhu
Technical Director 1/21/08.

Shealy Environmental Services, Inc.

Contract Number: EPW05031
Date: 01/18/2008

SDG Narrative

Case 37088
SDG B4J48

EPA Sample Numbers

EPA Sample Number	Aroclor Fraction	Dilution/ Reanalysis
B4J48	Yes	Yes
B4J49	Yes	Yes
B4J50	Yes	Yes
B4J51	Yes	Yes
B4J52	Yes	Yes
B4J53	Yes	Yes
B4J54	Yes	Yes
B4J55	Yes	Yes
B4J56	Yes	Yes
B4J57	Yes	No
B4J58	Yes	Yes
B4J58MS	Yes	No
B4J58MSD	Yes	No
B4J59	Yes	Yes
B4J60	Yes	Yes
B4J61	Yes	Yes
B4J62	Yes	Yes
B4J63	Yes	Yes
B4J64	Yes	Yes
B4J65	Yes	Yes
B4J66	Yes	Yes
B4J67	Yes	Yes

Columns	Aroclor #1 DB-XLB 30m x 0.32mm x 0.50um Aroclor #2 DB-35MS 30m x 0.32mm x 0.25um
PEST/Aroclor Equation	Water sample concentration ug/L = $\frac{(A_x)(V_t)(DF)(GPC)}{(\overline{CF})(V_o)(V_i)}$ Soil sample concentration (ug/Kg) = $\frac{(A_x)(V_t)(DF)(GPC)}{(\overline{CF})(V_i)(W_s)(D)}$ Where A_x is the response (peak area) of the compound to be measured. $\overline{CF}$ is the mean calibration factor from the initial calibration (area/ng). DF is the dilution factor. GPC = V_{in}/V_{out} : GPC factor. V_{in} is the volume of extract loaded onto GPC column. V_{out} is the volume of extract collected after GPC cleanup. V_t is volume of the concentrated extract in uL. (If no GPC cleanup is performed, then V_t = 1000uL. If GPC cleanup is performed, then $V_t = V_{out}$.) V_i is the volume of the extract injected in uL. V_o: Volume of water extracted in mL. W_s is the weight of sample extracted in g.. D= $\frac{100 - \%Moisture}{100}$

Sample Receiving

The cooler temperatures associated with these samples were 4.2, 5.8, and 6.1°C.

When the laboratory's sample receiving department was documenting the cooler temperatures on the TR for the samples received on 12/19, all three temperatures were recorded on each page of the TR/COC. The laboratory's data entry system has the correct temperature recorded for several of the samples; however, samples B4J28 through B4J65 have two temperatures associated with them. These samples will have two temperatures on the corresponding DC-1 forms. All of the temperatures are in range. Per Region 2, the laboratory's resolution is acceptable.

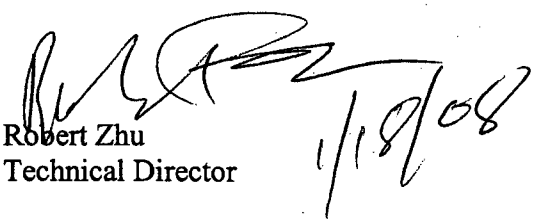
Aroclor Fraction

All samples in the SDG were extracted by the Automated Solvent Extractor (ASE). To ensure proper extraction, approximately 15 grams of sample were used for extraction. The final volume of the extract was brought to 5mL, instead of 10mL, so the CRQLs remain the same.

The surrogate decachlorobiphenyl (DCB) was manually integrated in several samples and standards due to improper baseline integration.

Sample B4J51 was re-extracted and re-analyzed due to low surrogate recoveries in the initial analysis. The re-extraction was performed outside holding time. Due to analyst oversight, the LCS spiking solution used for the re-extraction had a concentration 10 times higher than the concentration specified in the SOW. The reported recoveries are adjusted accordingly.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.



Robert Zhu
Technical Director

1/18/08

Shealy Environmental Services, Inc.

Contract Number: EPW05031
Date: 01/18/2008

SDG Narrative

Case 37088
SDG B4HT9

EPA Sample Numbers

EPA Sample Number	Aroclor Fraction	Dilution/ Reanalysis
B4HT9	Yes	Yes
B4HW0	Yes	Yes
B4HW1	Yes	Yes
B4HW2	Yes	Yes
B4HW3	Yes	Yes
B4HW4	Yes	Yes
B4HW5	Yes	No
B4HW6	Yes	Yes
B4HW6MS	Yes	Yes
B4HW6MSD	Yes	Yes
B4HW7	Yes	Yes
B4HW8	Yes	Yes
B4HW9	Yes	Yes
B4HX0	Yes	Yes
B4HX1	Yes	Yes
B4HX1MS	Yes	Yes
B4HX1MSD	Yes	Yes
B4HX2	Yes	Yes
B4HX3	Yes	Yes
B4HX4	Yes	Yes
B4HX5	Yes	Yes
B4HX6	Yes	Yes
B4HX7	Yes	No
B4HX8	Yes	Yes

Columns	Aroclor #1 DB-XLB 30m x 0.32mm x 0.50um Aroclor #2 DB-35MS 30m x 0.32mm x 0.25um

PEST/Aroclor Equation	Water sample concentration ug/L = $\frac{(A_x)(V_t)(DF)(GPC)}{(\overline{CF})(V_o)(V_i)}$ Soil sample concentration (ug/Kg) = $\frac{(A_x)(V_t)(DF)(GPC)}{(\overline{CF})(V_i)(W_s)(D)}$ Where A_x is the response (peak area) of the compound to be measured. $\overline{CF}$ is the mean calibration factor from the initial calibration (area/ng). DF is the dilution factor. GPC = V_{in}/V_{out} : GPC factor. V_{in} is the volume of extract loaded onto GPC column. V_{out} is the volume of extract collected after GPC cleanup. V_t is volume of the concentrated extract in uL. (If no GPC cleanup is performed, then V_t = 1000uL. If GPC cleanup is performed, then $V_t = V_{out}$.). V_i is the volume of the extract injected in uL. V_o: Volume of water extracted in mL. W_s is the weight of sample extracted in g.. D= $\frac{100 - \%Moisture}{100}$

Sample Receiving

The cooler temperature associated with these samples was 3.9°C.

Aroclor Fraction

All samples in the SDG were extracted by the Automated Solvent Extractor (ASE). To ensure proper extraction, approximately 15 grams of sample were used for extraction. The final volume of the extract was brought to 5mL, instead of 10mL, so the CRQLs remain the same.

The surrogates TCMX and decachlorobiphenyl (DCB) were manually integrated in several samples and standards due to improper baseline integration.

Manual integration was performed on aroclor 1248 on AR12483F1 and AR12483FU due to incorrect auto integration.

Manual integration was performed on aroclor 1254 on AR12543F1, AR12543FU and AR12543FZ due to incorrect auto integration.

Manual integration was performed on aroclor 1262 on AR12623F1 due to incorrect auto integration.

Manual integration was performed on aroclor 1268 on AR12683F1 due to incorrect auto integration.

Manual integration was performed on aroclor 1016 on AR16603FU and ALCS45 due to incorrect auto integration.

All soil samples in this SDG, with the exception of B4HX7, had to be re-extracted due to un-matching chromatograms for B4HX1MS and B4HX1MSD. To ensure that samples were not switched during preparation, these affected samples were re-extracted and reanalyzed. The re-extraction was done outside the holding time. The re-analysis results matched very well with the initial analysis, with the exception of B4HX3 and B4HX6. For both samples, the initial and reanalysis show aroclor 1254, however, the concentrations were quite different. This could be due to the sample matrix.

The extract of sample B4HX7 was lost during the sample preparation stage due to broken glassware. The sample was re-extracted outside holding time. In lab's communication to SMO regarding this issue, sample B4HT9 was reported as the one lost. It should have been B4HX7.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Robert Zhu
Technical Director 1/18/08

Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number: B4J68

Laboratory Name: Shealy Environmental

Laboratory Code: SHEALY

Contract No.: EPW05031

Case No.:37088

Analysis Price: $440

SDG Turnaround: 21-DAY

Modified Analysis (if applicable): NO

Modification Reference No.: N/A

EPA Sample Numbers in SDG (Listed in Numerical Order)

1) B4J68	7) B4J74	13) N/A	19) N/A
2) B4J69	8) B4J75	14) N/A	20) N/A
3) B4J70	9) B4J76	15) N/A	21) N/A
4) B4J71	10) B4J77	16) N/A	22)N/A
5) B4J72	11) B4J78	17) N/A	23)N/A
6) B4J73	12) N/A	18) N/A	24)N/A

B4J68
First Sample in SDG

B4J78
Last Sample in SDG

12/19/07
First Sample Receipt Date

12/19/07
Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples [excluding Performance Evaluation (PE) samples] in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature: Julie Mamangke

Date: 01/02-/08

Contract Laboratory Program

RECEIVED
JAN 2 2 2008
HAZ. WASTE SUPPORT SEC

Sample Delivery Group (SDG) Cover Sheet

SDG Number: B4J48

Laboratory Name: Shealy Environmental

Laboratory Code: SHEALY

Contract No.: EPW05031

Case No.:37088

Analysis Price: $440

SDG Turnaround: 21-DAY

Modified Analysis (if applicable): NO

Modification Reference No.: N/A

EPA Sample Numbers in SDG (Listed in Numerical Order)

1) B4J48	7) B4J54	13) B4J60	19) B4J66
2) B4J49	8) B4J55	14) B4J61	20) B4J67
3) B4J50	9) B4J56	15) B4J62	21) N/A
4) B4J51	10) B4J57	16) B4J63	22)N/A
5) B4J52	11) B4J58	17) B4J64	23)N/A
6) B4J53	12) B4J59	18) B4J65	24)N/A

B4J48
First Sample in SDG

B4J67
Last Sample in SDG

12/19/07
First Sample Receipt Date

12/19/07
Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples [excluding Performance Evaluation (PE) samples] in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature: [signature]

Date: 01/07/08

Contract Laboratory Program

RECEIVED
JAN 2 2 2008
HAZ. WASTE SUPPORT SEC

Sample Delivery Group (SDG) Cover Sheet

SDG Number: B4HT9

Laboratory Name: Shealy Environmental

Laboratory Code: SHEALY

Contract No.: EPW05031

Case No.:37088

Analysis Price: $440

SDG Turnaround: 21-DAY

Modified Analysis (if applicable): NO

Modification Reference No.: N/A

EPA Sample Numbers in SDG (Listed in Numerical Order)

1) B4HT9	7) B4HW5	13) B4HX1	19) B4HX7
2) B4HW0	8) B4HW6	14) B4HX2	20) B4HX8
3) B4HW1	9) B4HW7	15) B4HX3	21) N/A
4) B4HW2	10) B4HW8	16) B4HX4	22)N/A
5) B4HW3	11) B4HW9	17) B4HX5	23)N/A
6) B4HW4	12) B4HX0	18) B4HX6	24)N/A

B4HT9
First Sample in SDG

B4HX8
Last Sample in SDG

12/13/07
First Sample Receipt Date

12/13/07
Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples [excluding Performance Evaluation (PE) samples] in an SDG. Attach the TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature: [signature]

Date: 12/20/07

Robert Zhu

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Dr. Zhu" <rzhu@shealylab.com>; "Shirani Wickramasinghe" <swickramasinghe@shealylab.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Thursday, December 27, 2007 2:49 PM
Subject: Region 02 | Case 37088 | Lab SHEALY | Issue Laboratory problems | FINAL

Shirani,

Summary Start
Issue: When the laboratory's sample receiving department was documenting the cooler temperatures on the TR for the samples received on 12/19, all three temperatures were recorded on each page of the TR/COC. The laboratory's data entry system has the correct temperature recorded for several of the samples; however, samples B4J28 through B4J65 have two temperatures associated with them. These samples will have two temperatures on the corresponding DC-1 forms. All of the temperatures are in range.
Resolution: Per Region 2, the laboratory can proceed with reporting the data as indicated with samples B4J28 through B4J65 having two temperatures. The laboratory should note the issue in the SDG Narrative.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----
From: Feranda.Jennifer@epamail.epa.gov
[mailto:Feranda.Jennifer@epamail.epa.gov]
Sent: Thursday, December 27, 2007 2:35 PM
To: Von Moll, Kristin
Cc: Michael.Adly@epamail.epa.gov; Rudolph, Elizabeth
Subject: RE: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Kristin - In re-reading the e-mail below, I see that you had already indicated the temperatures were in range. Please have the lab proceed with reporting the data as indicated below.

If you have any questions, please let me know.

Jennifer

Jennifer E. Feranda
U.S. EPA Region II
CLP Project Officer/RSCC
Phone: (732) 321-6687
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
12/27/2007 11:56 AM

To: Jennifer Feranda/R2/USEPA/US@EPA
cc: Adly Michael/R2/USEPA/US@EPA, "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: RE: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Jennifer,

Yes all of the temperatures are within range.

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----

From: Feranda.Jennifer@epamail.epa.gov
[mailto:Feranda.Jennifer@epamail.epa.gov]
Sent: Thursday, December 27, 2007 11:51 AM
To: Von Moll, Kristin
Cc: Michael.Adly@epamail.epa.gov; Rudolph, Elizabeth
Subject: Re: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Kristin - Are the temperatures within the appropriate range?

Jennifer

Jennifer E. Feranda
U.S. EPA Region II
CLP Project Officer/RSCC
Phone: (732) 321-6687
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
12/27/2007 11:43 AM

To: Adly Michael/R2/USEPA/US@EPA, Jennifer Feranda/R2/USEPA/US@EPA
cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Adly,

SHEALY is reporting the following issue regarding Case 37088.

Issue: When the laboratory's sample receiving department was documenting the cooler temperatures on the TR for the samples received on 12/19, all three temperatures were recorded on each page of the TR/COC. The laboratory's data entry system has the correct temperature recorded for several of the samples; however, samples B4J28 through B4J65 have two temperatures associated with them. These samples will have two temperatures on the corresponding DC-1 forms. All of the temperatures are in range.

Please advise on how the laboratory should proceed.
Thanks,

Kristin Von Moll

CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

From: Rudolph, Elizabeth
Sent: Thursday, December 27, 2007 11:29 AM
To: Von Moll, Kristin
Subject: FW: case 37088- issue revised

From: Shirani Wickramasinghe [mailto:swickramasinghe@shealylab.com]
Sent: Thursday, December 27, 2007 11:06 AM
To: Rudolph, Elizabeth
Cc: Robert Zhu
Subject: case 37088- issue revised

Beth,

I need to amend my last email. All 3 temperatures are recorded on each page of the TR. However, when I looked in our data entry system several samples have the correct temperature associated with them. Samples with IDs B4J28 through B4J65 have 2 temperatures associated with them (both in range). These samples will have two temperatures on the corresponding DC-1 forms as we can not differentiate which cooler they came from.
Sorry for the confusion.

Shirani Wickramasinghe
Project Manager
Shealy Environmental Services, Inc.
803-791-9700 Ext. 118
803-227-3154 direct dial
swickramasinghe@shealylab.com

From: Shirani Wickramasinghe [mailto:swickramasinghe@shealylab.com]
Sent: Thursday, December 27, 2007 10:55 AM
To: Rudolph, Elizabeth

Cc: Robert Zhu
Subject: case 37088

Beth,

When our sample receiving department was documenting the cooler temperatures on the TR for the samples received from case 37088 on 12/19, they recorded all three temperatures on each page of the TR/COC. At this point we can not differentiate which temps are associated with which samples to fill out the DC-1 form. As all temperatures are in range we have recorded all temperatures on each DC-1 for this shipment.

Thank you,

Shirani Wickramasinghe
Project Manager
Shealy Environmental Services, Inc.
803-791-9700 Ext. 118
803-227-3154 direct dial
swickramasinghe@shealylab.com

Robert Zhu

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Dr. Zhu" <rzhu@shealylab.com>; "Shirani Wickramasinghe" <swickramasinghe@shealylab.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Thursday, December 27, 2007 2:49 PM
Subject: Region 02 | Case 37088 | Lab SHEALY | Issue Laboratory problems | FINAL

Shirani,

Summary Start
Issue: When the laboratory's sample receiving department was documenting the cooler temperatures on the TR for the samples received on 12/19, all three temperatures were recorded on each page of the TR/COC. The laboratory's data entry system has the correct temperature recorded for several of the samples; however, samples B4J28 through B4J65 have two temperatures associated with them. These samples will have two temperatures on the corresponding DC-1 forms. All of the temperatures are in range.
Resolution: Per Region 2, the laboratory can proceed with reporting the data as indicated with samples B4J28 through B4J65 having two temperatures. The laboratory should note the issue in the SDG Narrative.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----
From: Feranda.Jennifer@epamail.epa.gov
[mailto:Feranda.Jennifer@epamail.epa.gov]
Sent: Thursday, December 27, 2007 2:35 PM
To: Von Moll, Kristin
Cc: Michael.Adly@epamail.epa.gov; Rudolph, Elizabeth
Subject: RE: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Kristin - In re-reading the e-mail below, I see that you had already indicated the temperatures were in range. Please have the lab proceed with reporting the data as indicated below.

If you have any questions, please let me know.

Jennifer

Jennifer E. Feranda
U.S. EPA Region II
CLP Project Officer/RSCC
Phone: (732) 321-6687
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
12/27/2007 11:56 AM

To: Jennifer Feranda/R2/USEPA/US@EPA
cc: Adly Michael/R2/USEPA/US@EPA, "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: RE: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Jennifer,

Yes all of the temperatures are within range.

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----

From: Feranda.Jennifer@epamail.epa.gov
[mailto:Feranda.Jennifer@epamail.epa.gov]
Sent: Thursday, December 27, 2007 11:51 AM
To: Von Moll, Kristin
Cc: Michael.Adly@epamail.epa.gov; Rudolph, Elizabeth
Subject: Re: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Kristin - Are the temperatures within the appropriate range?

Jennifer

Jennifer E. Feranda
U.S. EPA Region II
CLP Project Officer/RSCC
Phone: (732) 321-6687
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com> 12/27/2007 11:43 AM

To: Adly Michael/R2/USEPA/US@EPA, Jennifer Feranda/R2/USEPA/US@EPA
cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: NEW ISSUE #36 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Adly,

SHEALY is reporting the following issue regarding Case 37088.

Issue: When the laboratory's sample receiving department was documenting the cooler temperatures on the TR for the samples received on 12/19, all three temperatures were recorded on each page of the TR/COC. The laboratory's data entry system has the correct temperature recorded for several of the samples; however, samples B4J28 through B4J65 have two temperatures associated with them. These samples will have two temperatures on the corresponding DC-1 forms. All of the temperatures are in range.

Please advise on how the laboratory should proceed.
Thanks,

Kristin Von Moll

CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

From: Rudolph, Elizabeth
Sent: Thursday, December 27, 2007 11:29 AM
To: Von Moll, Kristin
Subject: FW: case 37088- issue revised

From: Shirani Wickramasinghe [mailto:swickramasinghe@shealylab.com]
Sent: Thursday, December 27, 2007 11:06 AM
To: Rudolph, Elizabeth
Cc: Robert Zhu
Subject: case 37088- issue revised

Beth,

I need to amend my last email. All 3 temperatures are recorded on each page of the TR. However, when I looked in our data entry system several samples have the correct temperature associated with them. Samples with IDs B4J28 through B4J65 have 2 temperatures associated with them (both in range). These samples will have two temperatures on the corresponding DC-1 forms as we can not differentiate which cooler they came from.
Sorry for the confusion.

Shirani Wickramasinghe
Project Manager
Shealy Environmental Services, Inc.
803-791-9700 Ext. 118
803-227-3154 direct dial
swickramasinghe@shealylab.com

From: Shirani Wickramasinghe [mailto:swickramasinghe@shealylab.com]
Sent: Thursday, December 27, 2007 10:55 AM
To: Rudolph, Elizabeth

Cc: Robert Zhu
Subject: case 37088

Beth,

When our sample receiving department was documenting the cooler temperatures on the TR for the samples received from case 37088 on 12/19, they recorded all three temperatures on each page of the TR/COC. At this point we can not differentiate which temps are associated with which samples to fill out the DC-1 form. As all temperatures are in range we have recorded all temperatures on each DC-1 for this shipment.

Thank you,

Shirani Wickramasinghe
Project Manager
Shealy Environmental Services, Inc.
803-791-9700 Ext. 118
803-227-3154 direct dial
swickramasinghe@shealylab.com

Robert Zhu

From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Dr. Zhu" <rzhu@shealylab.com>; "Shirani Wickramasinghe" <swickramasinghe@shealylab.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>; "Adly Michael" <Michael.Adly@epamail.epa.gov>; "Jennifer Ferranda" <feranda.jennifer@epa.gov>
Sent: Monday, December 31, 2007 10:29 AM
Subject: Region 02 | Case 37088 | Lab SHEALY | Issue Laboratory problems | FINAL

Dr. Zhu,

Summary Start
Issue: The extract of a soil ARO sample, B4HT9, was lost during the sample preparation stage due to broken glassware. The laboratory will re-extract this sample; however, it has exceeded the 10-day contract required holding time and 14-day technical holding time.
Resolution: Per Region 2, the laboratory shall proceed with re-extraction and analysis. The issue should be noted in the SDG narrative.
Summary End

Please let me know if you have any other questions.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----
From: Feranda.Jennifer@epamail.epa.gov
[mailto:Feranda.Jennifer@epamail.epa.gov]
Sent: Monday, December 31, 2007 10:23 AM
To: Von Moll, Kristin
Cc: Michael.Adly@epamail.epa.gov; Rudolph, Elizabeth
Subject: Re: NEW ISSUE #38 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Yes, please have them proceed.

Jennifer E. Feranda
U.S. EPA Region II

CLP Project Officer/RSCC
Phone: (732) 321-6687
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
12/31/2007 10:25 AM

To: Adly Michael/R2/USEPA/US@EPA, Jennifer Feranda/R2/USEPA/US@EPA
cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: NEW ISSUE #38 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Hi Jennifer,

The sample was collected on 12/12/07 and received by the lab on 12/13/07. It is now 8 days over the contract required holding time.

Would you like me to advise the laboratory to proceed and note the issue?

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----
From: Robert Zhu [mailto:rzhu@shealylab.com]
Sent: Monday, December 31, 2007 10:16 AM
To: Von Moll, Kristin
Cc: Shirani Wickramasinghe
Subject: Re: NEW ISSUE #38 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Kristin:

The sample was collected on 12/12/07 and received by the lab on 12/13/07. It is now 8 days over the contract required holding time.

Robert Zhu, Ph.D
Technical Director
Shealy Environmental Services, Inc.
Phone:803-791-9700 Ext. 110
803-227-3152 direct dial
Fax: 803-791-9111
www.shealylab.com
rzhu@shealylab.com

----- Original Message -----
From: "Von Moll, Kristin" <kvonmoll@fedcsc.com>
To: "Dr. Zhu" <rzhu@shealylab.com>; "Shirani Wickramasinghe" <swickramasinghe@shealylab.com>
Cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Sent: Monday, December 31, 2007 10:08 AM
Subject: NEW ISSUE #38 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Dr. Zhu,

Regarding the issue for Case 37088 below, how long has it exceeded holding time?

Issue: The extract of a soil ARO sample, B4HT9, was lost during the sample preparation stage due to broken glassware. The laboratory will re-extract this sample; however, it has exceeded the 10-day contract required holding time and 14-day technical holding time.

Thanks,

Kristin Von Moll
CSC
Environmental Coordinator
(703) 818-4235
kvonmoll@fedcsc.com

-----Original Message-----

From: Feranda.Jennifer@epamail.epa.gov
[mailto:Feranda.Jennifer@epamail.epa.gov]
Sent: Monday, December 31, 2007 10:02 AM
To: Von Moll, Kristin
Cc: Michael.Adly@epamail.epa.gov; Rudolph, Elizabeth
Subject: Re: NEW ISSUE #38 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Kristin -

Please have the lab proceed with re-extraction and analysis. The issue should be noted in the SDG narrative.
How long has it exceeded the holding time(s)?

Jennifer

Jennifer E. Feranda
U.S. EPA Region II
CLP Project Officer/RSCC
Phone: (732) 321-6687
Fax: (732) 321-6622

"Von Moll, Kristin" <kvonmoll@fedcsc.com>
12/31/2007 10:04 AM

To: Adly Michael/R2/USEPA/US@EPA, Jennifer Feranda/R2/USEPA/US@EPA
cc: "Rudolph, Elizabeth" <erudolph@fedcsc.com>
Subject: NEW ISSUE #38 | Case 37088 | Lab SHEALY | Issue Laboratory problems

Jennifer,

SHEALY is reporting the following issue regarding Case 37088.

Issue: The extract of a soil ARO sample, B4HT9, was lost during the sample preparation stage due to broken glassware. The laboratory will re-extract this sample; however, it has exceeded the 10-day contract required holding time and 14-day technical holding time.

Please advise on how the laboratory should proceed.
Thanks,

Kristin Von Moll
CSC
Environmental Coordinator

(703) 818-4235
kvonmoll@fedcsc.com

From: Rudolph, Elizabeth
Sent: Monday, December 31, 2007 9:48 AM
To: Von Moll, Kristin
Subject: FW: Case 37088

From: Robert Zhu [mailto:rzhu@shealylab.com]
Sent: Friday, December 28, 2007 4:32 PM
To: Rudolph, Elizabeth
Cc: Shirani Wickramasinghe; Michael A. Woodrum; Kerry Hinshaw
Subject: Case 37088

Beth:

The extract of a soil Aroclor sample, B4HT9, was lost during the sample preparation stage due to a broken glassware. The lab will re-extract this sample, however, it has exceeded the 10-day contract required holding time and 14-day technical holding time. Let me know if the Region has different resolutions.

Robert Zhu, Ph.D
Technical Director
Shealy Environmental Services, Inc.
Phone:803-791-9700 Ext. 110
803-227-3152 direct dial
Fax: 803-791-9111
www.shealylab.com
rzhu@shealylab.com